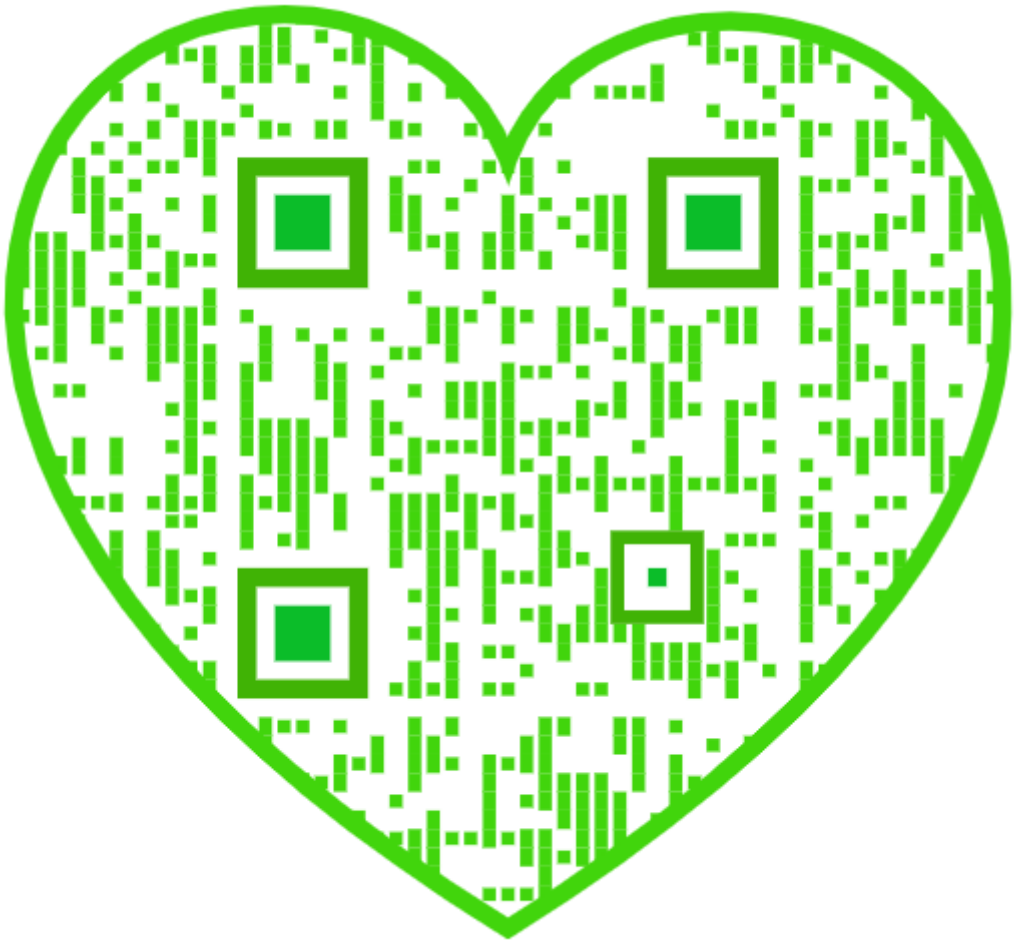

ON THE THEORY AND PRACTICE

OF

PAINTING

IN

OIL AND WATER COLOURS,

FOR

LANDSCAPE AND PORTRAITS;

INCLUDING THE

PREPARATION OF COLOURS, VEHICLES, VARNISHES, &c.,

METHOD OF PAINTING IN WAX, OR ENCAUSTIC;

ALSO ON THE

CHEMICAL PROPERTIES AND PERMANENCY OF COLOURS, &c.;

WITH

A MANUAL OF LITHOGRAPHY.

Illustrated with Plain and Coloured Plates.

BY T. H. FIELDING,

PROFESSOR OF PERSPECTIVE, AND PAINTING IN WATER COLOURS, TO THE SENIOR CLASSES AT THE HONOURABLE EAST INDIA COMPANY'S MILITARY COLLEGE;
AUTHOR OF "A SYNOPSIS OF PERSPECTIVE," &c.

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OF

THE HONOURABLE EAST-INDIA COMPANY,

This Work,

ON THE THEORY AND PRACTICE OF PAINTING,

IS,

WITH DEFERENCE AND RESPECT,

INSCRIBED,

BY THEIR MOST OBEDIENT AND HUMBLE SERVANT,

THEODORE H. FIELDING.

ADDISCOMBE, JULY 31ST, 1846.

PREFACE.

THE chief effect of improvement in arts and sciences is seen in their simplification, and consequently greater diffusion, giving increased advantages to subsequent writers, who may condense more than their predecessors, and at the same time be equally well, or better understood. The business, therefore, of an Author, is to endeavour to keep pace with the philosophical attainments of the age, which continually require increased precision, a shorter method of reasoning, and logical deductions as conclusive as those which are purely geometrical. Such deductions, however, cannot be hoped for, or even attempted, in a work on Painting, as there is no written language in which pictorial ideas can be definitively expressed. Perhaps the Author, influenced by this difficulty,

may be thought too brief in those places which relate to the philosophy of the art ; but if, where he may not have succeeded in conveying definite ideas, he may have supplied matter worthy of thought, he trusts that his work will be of some benefit to the Amateur, the Artist, and the general reader.

An extensive Theory of Painting was not intended by the Author in the present work, but rather one, which, being divided into short and comprehensive essays, or sections, might be easily remembered by the student. These and the chapters devoted to the practical parts were originally constructed for the benefit of his own pupils, in order to save their time as well as his own labour in tuition, and he has found it answer his most sanguine expectations; and also, if he may venture to judge by the demand for a Fourth Edition, he would hope that it has rendered equal services to others.

The Author has endeavoured to place some things in a new point of view ; and although he has borrowed freely, he believes that much original

matter will be found useful towards directing the student to a right method of estimating the difficulties of this art, and for assisting to remove most, if not all, by shewing that the mind must perform what too many think is to be accomplished by the hand.

In the practical part, a copious set of tints has been arranged as an Index, in order to save as much as possible the time usually devoted to the elementary department of colouring: to these the student can refer, as he would to a dictionary, for the explanation of a word. The assistance afforded by a few careful inspections of this Index will make the student acquainted with a greater number of mixed colours than he would probably acquire in a practice of many months; but the Author does not attempt the difficult task of entirely superseding the necessity of a teacher, in the practical part, believing it impossible to lay down in writing a code of rules sufficient to supply the place of oral communications, or to explain the manner of doing some things, that depend on a facility of hand acquired by long practice, and which must be seen to be understood.

A Manual of Lithography is added with the usual mode of printing the stones, &c., perhaps a little more minutely than might seem required in a country like England, where the great division of labour renders every one so complete in his own department, that it is infinitely better to purchase the materials ready prepared than to attempt to make them; but in India this is not the case, and it has been the Author's wish in thus detailing all the operations, that his pupils, whilst there engaged in the duties of their honourable and arduous profession, may be able to establish a press whenever it may be necessary, and wherever a stone of moderate qualities can be found, as superior quality is not required for the common and more generally useful purposes of lithography.

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ON THE

THEORY OF PAINTING.

EXPLANATION OF TERMS USED IN PAINTING.

ACCESSARIES are adjuncts introduced into a picture, to give relief and beauty, without being absolutely necessary to the subjects represented.

ACCIDENTS, ACCIDENTALS, are lights, objects, or small groups of objects, &c., suggested by convenience, and introduced as after-thoughts, not having been included in the original composition of the picture. These assist materially the effect, but are too trifling to be enumerated in the construction of the picture; as smoke, drops of water on flowers, lights amongst clusters of leaves, weeds, &c.

ANTIQUE is a term applied to paintings and statues, basso relievos, medals, intaglios, or engraved gems, such as were wrought by the Greeks and Romans, from the time of Alexander the Great until the commencement of the dark ages. It was previous to this period that the arts had been carried to the greatest perfection among the Greeks and Romans.

ATTITUDE, in painting, comprehends all the motions of

the body, and disposition of the limbs of a figure. From the attitude we learn the action in which a figure is engaged, and some of the sentiments supposed to be felt by it. The choice of attitudes ought always to be such as to display the most beautiful parts of the figure, and to give grace to the action, and is one of the principal excellencies and difficulties of grouping.

BREADTH. By this word we generally imply that the lights and shadows, also colours, are arranged in masses, by which grandeur of effect and expression is obtained. Correggio excelled in this impressive quality. Breadth is completely destroyed by small detached lights and shadows, scattered irregularly throughout the picture.

BACK-GROUND is a term given to the space behind a portrait or group of figures, and upon its happy arrangement depends much of the effect of a picture. Sir Joshua Reynolds was extremely fortunate in his choice of back-grounds, which are generally elegant and appropriate; and the value that Reubens placed on this too frequently neglected part may be learned by the following anecdote. Being requested to take a young artist under his instruction, he was informed, by way of recommendation, that the youth had already made some progress in the art, and would be able to assist him considerably in painting his back-grounds. Reubens replied, that if he were really capable of painting back-grounds well, he required very little instruction.

CHARGED is a term frequently applied to an exaggerated outline or attitude, exceeding the natural proportions or position of a figure, and is applicable to many of

the designs of Fuseli as well as some others, though there are few specimens of it in the ancient statues.

Middle Tint, as the words imply, are those tints which are equally removed, or nearly so, from light or darkness.

Distemper is a mode of using colours mixed with any kind of size, or other glutinous substances, and was in use before the discovery of oil painting in A.D. 1410. Of this mode the cartoons of Raffaelle are the finest remaining specimens.

Dryness implies that meagreness of style and contour which was the defect of the early painters in oil, the colouring hard and flat, the outline stiff and ungraceful. The paintings found in some of the Egyptian tombs are extreme specimens of this term.

Elegance expresses that happy union of skill and taste, where an artist embellishes objects in form and colour without departing from the propriety of nature. That this quality does not always depend upon correctness of outline, the works of Correggio and Sir J. Reynolds have strongly evinced.

Foreshortening. When any figure, or portion of a figure, or any other object, is so placed that its length appears diminished, it is called foreshortening. Thus a figure extending an arm towards the spectator, the arm becomes foreshortened.

Fresco is a mode of painting with water-colours on plaister or mortar before it becomes quite dry, when the colours, being incorporated with the plaister, retain their freshness for ages. Of this mode several specimens are yet in existence, discovered in Herculaneum and Pompeii.

Grotesque is a term applied to those paintings where

the imagination has been consulted instead of natural forms, as in subjects like the temptation of St. Anthony, where non-descripts, of the most uncouth shapes, are depicted. Formerly the term was principally given to the antique paintings or ornaments which were discovered on the sides of grottoes, and which were usually of this class.

GROUPING is a combination of figures, animals, or objects.

HARMONY, as applicable to painting, means the proper agreement with each other of colours, lines, lights, and shades, and indeed all the component parts of a picture.

LOCAL COLOURS are those which most predominate, belong to, and particularly characterize any object or part of a picture.

MANNER is the characteristic style of an artist by which his works are generally known; but by adhering too closely to one mode of painting, the works of an artist become too mannered. This is a great fault when carried far.

RELIEF, in painting, is the proper detachment of one object from another, as a figure from its ground, &c., so as to give to every portion of the picture the character of truth and nature with distinctness.

STYLE cannot be better defined than it has been by Sir J. Reynolds, who says, that "in painting style is the same as in writing; a power over materials, whether words or colours, by which conceptions or sentiments are conveyed."

TONE is most commonly used to denote the depth or brilliancy of a painting, and is very generally used in place

of harmony. Thus, if some part of a painting be said to be out of tone with the rest, it is meant that either the colours, lights, or shadows, do not agree with the surrounding tints, or do not truly represent the distance at which the objects ought to appear. The word tone is also often used for the prevailing hue of a painting, representing the impression of particular effects.

INTRODUCTORY AND GENERAL REMARKS.

AMONG the great number of artists that have lived since the revival of painting, how few stand in the first class of their profession. For this there must be causes not wholly consisting in the difficulties of the art; and one cannot but imagine that some mistake has constantly pursued this large majority, and prevented them from perceiving in what the chief intention of painting consists, as many, with minds powerful and competent to the greatest exertions, have failed.

That there are great difficulties in painting when carried to any extent will readily be admitted, if we consider that a proper knowledge of it includes an acquaintance with the external (and often internal) properties of all visible things, and those under every possible aspect and impression.

One great source of error arises from believing the art to be something that depends only on a ready use of the hand; that a brilliant or a subdued set of colours, a rich fulness of pencilling, and some other things included under what is technically termed handling, compose the chief excellencies of painting; in short, placing in the manipulations of the art its sole merit.

To the success of those who continue under this misapprehension there is an impassable barrier, at which, with

diligence, they are not long in arriving; but for those who, fortunately escaping an idea so wrong, have been persuaded that the intention of painting is almost entirely an effort of the mind, and not of the fingers, an unlimited progress and constant improvement are opened, ending only with their lives.

The Artist certainly has to learn the fluent use of his means, as persons learn to write; but he should not make so fatal a mistake as to consider the means as the end, but whilst learning the language of his profession, he must endeavour to find out those principles in all things that have any similarity in their uses, and which may be suitable to all the various classes of living, as well as lifeless matter operated upon by Nature.

Quintilian (lib. vii, cap. 10) appears to have known this, for he observes that, "by several examples, the order and connection of things must be shewn; that by continual practice we may still pass on to things of like nature, for it is impossible to explain all things that can be imitated by art, neither is there any painter that has learned to imitate all things, but having once perceived the *true manner*, he will easily obtain the similitude of such things as come before him." Now this "true manner" is of infinite importance: nor can it be obtained by any labour of the hand, being dependant alone on judgment, or a right mode of seeing and thinking; and when we are so fortunate as to hit this happy method, we discover that Nature's principles of working are based upon the most perfect and solid reason, such as the yielding resistance offered to the elements by every plant, with a sufficient and appropriate adjustment, as the plant increases; giving a similarity and

beautiful fitness of construction to all vegetable matter. We find this in every thing that Nature does, from her chemical operations on what is considered inert matter, to the construction of the most intelligent beings; and it is the discovery of this reasoning power in the formation of things at which we must aim, for without it all the mechanism of lines and colours, or dexterity of hand, will be labour in vain.

This kind of knowledge is obtained from Nature only. There is another kind, which is to be gained from studying the works of our predecessors; and by observing carefully how they arranged their materials for a picture, we speedily learn that some modes are better than others, and that in all the different modes, a very accurate attention to the lineal and aërial perspective is one prominent and leading feature; that the proprieties and decorum of life are always observed. If one of a group be represented speaking, others, who are near him, are not also represented speaking; or if some are inattentive, they are removed a little way from the chief actors.

The feelings and passions are also to be expressed with a suitableness to the character of the figure depicted: thus the griefs and pleasures of the humbler classes must partake in a proper degree of their boisterous nature; yet we are not entirely to cut them off from the power of expressing themselves with grace, and even sometimes with elegance. In the same manner, although we give to the higher classes their characteristic suavity, and gentleness of demeanour, we must add to this, on some extraordinary occasions, more energy of action than the strictest decorum perhaps might allow to their rank. But in all these things neither

the painter nor the poet can have any limitation pointed out to him: that tact proceeding from a highly cultivated mind, which by increased sensibility more readily receives impressions, tells both poet and painter that he can only succeed on one grand principle, and that success in their art will depend, as Cicero says when speaking of oratory, on their insight into the nature of mankind, and all the powers of humanity.

The knowledge of colours, and the various modes of using them, are not the end, but rather the beginning of painting. They are the artist's language; fortunately a universal language, which all nations can read. He must learn to express himself in it with ease, distinctness, simplicity, and gracefulness, and he must be careful that the whole intention of the picture is expressed in a temperate and chastened style, as far removed from ostentatiousness and affectation, as from mawkish insipidity; infusing a proper degree of energy, and yet not too much, for even in a storm, or the raging of the most vehement passions, a sober dignity is to be preserved. By these means the finer distinctions of character may be marked, which in a more vulgar style would be entirely lost or unseen.

Dryden, criticising in dramatic writers the absence of this necessary sobriety (and probably alluding to Nat. Lee), says, "Another had a great genius for tragedy: following the fury of his natural temper, he made every man, and woman too, stark raging mad; there was not a sober person to be had for love or money. All was tempestuous and blustering. Heaven and earth were coming together at every word, a mere hurricane from beginning to the

end, and every actor seemed to be hastening on to the day of judgment."

This exuberance, or, more strictly speaking, vulgarity, so disagreeable to nature, and the few whose opinions being formed upon philosophical principles are alone worthy of attention, can only be checked by frequent practice in copying from the best works, which will strengthen the memory, correct the eye, and aid in forming a style: also the mind, by this kind of practice, if we may be allowed an expression borrowed from our art, becomes toned down to a healthy state; its redundancies are corrected; wrong ideas, like chaff, are thrown to the surface, and discarded imperceptibly; a precision and terseness in the language of the art are gained, having for its foundation a modest simplicity, to which grace and elegance most readily unite, making altogether that best compound of skill recommended by Horace, in which art is not perceptible.

A very frequent anomaly is found in some who can judge well of the works of others, yet who can neither perform well, nor say on what principles they found their judgment. These we generally find ascribe the success of the fortunate to something not acquired, but innate, which they call genius; forgetting, or never having learned, a valuable precept of Sir J. Reynolds, that whatever is done well is done by some certain rule, otherwise it could not be repeated; an observation containing so much truth, so much instruction, and so strongly inculcating the necessity of method, that it ought always to be remembered.

This rule for doing well is only to be found in the works

of those who have become eminent, and from them we must borrow, as the largest stock of individual knowledge is small, when compared with the grand bulk or treasury of human learning, which has been transmitted to us in various ways; and from this we must continue to borrow until we may be able in some measure to restore the debt. If we can then add a few grains, or a single grain of information to that already amassed, whether it be in painting or any other science, society will have received an advantage.

As the improvement of any of the sciences or arts carries also improvement to all the rest*, it would be of some advantage to them, and certainly of great and beneficial use to painting, were it allied to classic literature by academic honours in our Universities. Music and poetry have there their professors, and it may be hereafter discovered, what to many is already known, that a knowledge of the higher principles of painting can assist some of the most important sciences.

An orator, who will well examine the principles on which a good picture is constructed, may find many valuable hints which written precepts cannot supply. The medical practitioner, in the study of pathology, has to depend much on a refined power in the discrimination of colours and tints, with their various gradations. How frequently he learns more from these than any thing the patient can tell him! Perhaps, whilst young, he may be startled by the deceptive appearance which mere change of dress will give; as when a florid patient has apparently

* "There is no art which is not either the parent or near relation of another."—*Tertullian.*

increased the colour in his face to more than a hectic flush, by simply putting on a dress of a powerfully contrasting colour, and by other changes of a similar nature.

That the study of Nature is calculated to give the truest ideas on subjects of the greatest utility, needs no enforcing: yet we cannot resist the satisfaction of giving a remarkable fact in illustration.

Smeaton and his predecessors had tried in vain to make a permanent light-house on the Eddystone rocks (which lie out in the sea about fifteen miles from the coast), after considering with dismay the rapid destruction of prior edifices, a happy idea occurred to him, by the adoption of which he has been rewarded in the duration of his building up to the present time. He had the good fortune to perceive it necessary, in a place where Nature works with terrific force, to oppose those convulsions with one of her own forms, and discarding the prejudices of science in the search, he took our strongest tree, grown amidst similar storms, for his instructor and his guide. "He conceived the idea of his edifice from the bole of a large spreading oak. Considering the figure of the tree as connected with its roots, which lie hid below the ground, Mr. Smeaton observed that it rose from the surface with a large swelling base, which at the height of one diameter is generally reduced by an elegant concave curve, to a diameter less by at least one-third, and sometimes to half its original base; hence he deduced what the shape of a column of the greatest stability ought to be, to resist the action of external violence, when the quantity of matter of which it is to be composed is given;" adding, were it wanted, additional proof, that whatever is successfully attained in any

of the arts or sciences has its first elements taken from Nature.

An Architect, without a very refined knowledge of drawing, must be classed among the handicraft occupations of stonemason and bricklayer; for architecture is nothing more than drawing a design made manifest in some kind of building materials, added to a practical knowledge of the materials employed.

Painting is the least generally understood of all the arts and sciences, and the reasons are obvious. The first arises out of the absence of a well-regulated instruction in those places where instruction in all liberal knowledge ought to abound; where in every other department of knowledge it is most abundant; and where, if the proper study of painting or designing could be added, some students, by it, might be induced to think, when all other branches of learning, human and divine, had been tried in vain, and thus occupy some of those hours devoted by many to pursuits of a much less meritorious description *.

The exquisite charms of poetry and music render them worthy of all the honours they receive in our universities: and were painting as generally understood, it would be equally favoured, for it has also its peculiar uses and charms. Its pleasures are conveyed to the mind through the sight—a sense that affords to us the purest and least alloyed of all our enjoyments; and most are aware, that knowledge acquired by vision is more perfect, and more lasting, than any which is acquired by the other senses.

* "Propter ignorantiam artis, virtutes obscurantur."—*Vitruvius*, B. v.

Another cause of the want of information on painting exists in the great difficulty of finding good works for reference or study. Copies of the best writers in poetry or prose are to be had everywhere, and at prices that all can command. The best musical compositions are as easily obtained, and the value of an opera or concert ticket will also command specimens of the first performances in execution. It is not so with painting: the best are only to be found in the galleries of princes, the richest amateurs, or metropolitan exhibitions. To become acquainted with these, much valuable time must be employed, attended with expensive journeys. Thus it is evident that the chief works of art, as well as the true power which painting possesses, can never, in the present state of things, be so generally known as to include them under the items of cheap or common knowledge.

It has been remarked by the eminent Sir John Herschell *, that "a clever man shut up alone, and allowed unlimited time, might reason out for himself all the truths of mathematics by proceeding from those simple notions of space and number of which he cannot divest himself, without ceasing to think; but he could never tell, by any effort of reasoning, what would become of a lump of sugar, if immersed in water; or what impression would be produced on the eye by mixing the colours yellow and blue." It is equally true that the scientific branches of painting have had to depend on many points of knowledge derived from previous experiments; and upon these experiments, assisted by our reasoning powers, through successive gene-

* Herschell's Discourse on Natural Philosophy, p. 76.

rations, a beautiful and splendid theory has been constructed; of which, in the following pages, we have attempted a very brief, but general outline.

When Alexander ordered that all the Macedonian nobility should study this art*, he might have had (in addition to a real love for it, doubtless produced by seeing the works of his favourite Apelles) some ulterior views or intentions, as to its uses in perfecting that invaluable qualification in an officer, the military *coup d'œil*, on which not seldom depends the safety both of armies and of nations †.

Although our zeal would not carry us so far as to make it compulsory, nor, like that of the Athenians in their admiration of painting, forbid the study of it to people of servile condition, yet we should be glad to see it so understood among the well educated, that the feelings of even very moderate judges might less frequently be offended by the sight of works too often beneath contempt, but still to be found in many of the houses of the opulent.

We shall conclude these general remarks by a partial

* Pliny, Book xxxv, chapter 10.

† It is in the tempest and in war that the perfect naval officer displays the value of that highest degree of tact, which the cultivated mind only can receive from experience, when a single glance of the eye, followed by one short monosyllable of command, is to give life or death to hundreds of human beings placed under his care and protection; and that drawing is a valuable study for this refinement and instantaneous discrimination, which the eye must absolutely possess on extraordinary occasions, needs no proof. Cicero was aware of it when he said, "How many things do painters *(pictores)* see, whether in shadows or in the highest lights, which are not seen by us!"—Lib. ix. Acadm. quæst.

extract from a talented writer in the Edinburgh Review for June 1829, on "Military Education." He says, speaking of drawing, "independently of the practical applications of this art, it is a most important engine for improving the faculty of observation as to all objects of sight, and increasing the power of memory for such object. The truth is, that to see clearly what exists, is an art to be acquired only by practice and experience. It is, in fact, thus only that all our senses are matured in those who possess the perfect use of them; nor do we say too much when we aver, that the art of seeing is never acquired in perfection for any class of objects, except by him who has acquired the power of representing them through drawing. They who have not reflected on the subject may be startled at such an assertion; but, in reality, it is more the accurate knowledge or discernment of forms that constitutes an artist, than any mechanical power in representing them. Whatever ordinary spectators may suppose their knowledge of the form of any definite object, of a piece of architecture for example, a tree, or an animal, is in truth very vague and imperfect, and he who will make the trial, so as at length to draw what he was used to look at, will soon convince himself that this is rigidly true. * * * The case is like that of the student of natural history, who habitually sees a multitude of plants or insects that escape the ignorant, though they may be equally present to the eyes of the latter, on which, in reality, they make no more impression than on the eyes of the quadruped. Nothing, indeed, is properly or really seen, which does not convey a distinct and definite idea, that may be recalled or described in all its details by the observer; and it is a meta-

physical truth, that what is commonly called a defective memory, is often nothing but defective observation, or the want of impressions originally definite and complete."

We may venture to add, that if the study of this art had no other recommendation than these, of improving the faculties of observation and memory, and of inducing a habit of thinking more deeply on the visible works of the creation, and through them of their great Creator, it would still be worthy the fostering care granted to the sciences, at those seats of learning, whose fiat stamps them with a more current value, and generally sanctions their pretensions in society.

DESIGN, COMPOSITION, AND INVENTION.

In some writers on painting, each of these words is made to comprehend the other two; by others, a separate department is given to each of them: as the outline to design, the placing of figures, groups, &c. to composition, and the whole intention of the picture in all that relates to the story or subject, to invention.

Of the outline little more can be said, than that it ought to be perfect as to form, and agreeably varied, so that there may be a sufficient and proper contrast kept up throughout the piece. Perfection of outline is a circumstance that rarely happens in any picture: indeed, some artists have been so indifferent on this head, that it might be taken for a branch of the art beneath their attention; whilst others have been so solicitous, as to produce in their works the hard appearance which characterizes the earlier epochs of painting. That the outline should be as correct as possible need not be enforced; but it most assuredly is a great fault, to display it so strongly as to destroy the effect of those higher departments to which it is only the first step; for outline alone, where correctness is all that is sought, may be called mechanical, whilst the rest, in most cases, has to proceed entirely from the mind.

In arranging the outline or subject, we call to our aid what is understood by composition, which is so employed

as to permit every interesting object to be sufficiently developed, concealing, or sinking into some kind of obscurity, those things which are least necessary to the story.

If the subject be historical, the principal personages should be so placed that they and their actions may be clearly understood. They are not to be crowded; or if it be necessary that they should be surrounded by a multitude, they are to be separated from the mass by having the chief light placed on them, and by leaving an opening in the group in order to display this light, and with it the chief actors in the picture. The remainder of the figures are to receive light in proportion to the share they have in the general conduct of the piece.

Landscape outline, or composition of outline, seems to be of little consequence, if we may judge from the practice of some of our best landscape painters; and perhaps it may be from this circumstance that so few of the landscape painters have excelled. Not fully aware of the ulterior charms in this department, they have been discouraged by the absence of initiatory beauties in the outset: for it not unfrequently happens that a view yields little more than a straight light, separating the distant land from the sky; yet a subject as barren as this will afford to the adept in chiaro-scuro and colouring, an opportunity of shewing his strength, as we sometimes see produced out of such simple materials, extremely vivid, interesting, and scientific pictures. An outline that is well diversified and in a natural manner, will always be more agreeable to the eye than a repetition of lines without variety; for the sight is as soon displeased or fatigued with monotony and repetition of

forms, as the ear is with the continual recurrence of the same sounds; and where the outline is deficient, the artist has to compensate for it by a judicious arrangement of colours with light and shade.

Much stress has been laid on various methods in the arrangement of lines; but that arrangement which best conducts the sight *perspectively* through the picture to the places of interest, and which happens to be the best adapted to the subject, is the only universal rule that can be given. A small number of rules for an infinite variety of subjects must often be in error.

"Composition, taken generally," says Sir Joshua Reynolds, "is the principal part of invention, and is by far the greatest difficulty the artist has to encounter. Every man that can paint at all can execute individual parts: but to keep those parts in a due subordination, as relative to a whole, requires a comprehensive view of the art, that more strongly implies genius than perhaps any other quality whatever."

Simplicity of construction in every branch of painting will be found the best mode of making a powerful impression. This simplicity is discoverable in all our best historical pictures, as in the Cartoons of Raffaelle, where the chief interest is confined to a very small number of actors. In the pictures of "St. Paul preaching at Athens," and the "Death of Ananias," the most unlearned in painting will be able to point out those parts which only have the greatest interest: the rest are merely accessories, giving support to the principal action of the piece by their expression and attitudes.

Richardson, in his treatise on painting, describes several

pictures under the head Composition, but which might have been described with more propriety under that of chiaro-scuro, did he not include in the word composition almost every thing belonging to the completion of a picture. "In the 'Descent from the Cross,' by Rubens," he says, "the Saviour is the principal figure. This being naked and about the centre of the picture, would have been distinguished as the heightening of this mass of light: but not content with that, and to raise it still more, this judicious master has added a sheet in which the body lies, and which is supposed to be useful to deliver it down safely, as well as to carry it off afterwards. But the main design is what I am observing, and for that it is admirably introduced."

In the following extract from the same writer, it will be seen that he allows colour, also, a principal place in composition. "Sometimes a figure has to hold a place which does not sufficiently distinguish it; in that case, the attention must be awakened by the colour of its drapery, or part of it, or by the ground on which it is painted, or some other artifice. Scarlet, or some vivid colour, is proper on such occasions. I think I have met with an instance of this kind from Titian in a 'Bacchus and Ariadne*:' her figure is thus distinguished, for the reason I have given. And in a picture by Albano, our Lord is seen at a distance as coming towards some of his disciples, and though a small figure, is nevertheless the most apparent in the picture, by being placed on a rising ground, and painted upon the bright part of the sky, just above the horizon."

* Now in the National Gallery.

The readiest way of making the composition of a picture complete, is certainly that adopted by Rubens, and recommended by Sir J. Reynolds; which is, instead of being content with a mere outline, or an outline finished in light and shade, to paint the whole subject slightly from the first.

He says: "This method of painting the sketch, instead of merely drawing it on paper, will give a facility in the management of colours and in the handling, which the Italian painters, not having this custom, wanted. By habit, he will acquire equal skill in doing two things at a time, as in doing only one.

"An artist, as I have said on another occasion, if possible, should paint all his studies, and consider drawing only as a resource when colours are not at hand. This was the practice of the Venetian painters, and of all those who have excelled in colouring. Correggio used this manner. The method of Rubens was to sketch his composition in colours, with all the parts more determined than sketches generally are. From this sketch scholars advanced the picture as far as they were capable, from which he retouched the whole himself.

"The painter's operation may be divided into three parts: the planning, which implies the sketch of the general composition; the transferring that design to the canvas; and the finishing or retouching the whole. If, for dispatch, the artist looks out for assistance, it is in the middle stage only that he can receive it: the first and last operations must be the work of his own hand."

The rules of composition for historical, as well as landscape paintings, are most quickly learned by inspecting

the large works of the best masters; and when these cannot be seen, good prints will give valuable information. Annibal Caracci was of opinion, that a perfect composition should not have more than twelve figures; that out of these might be made three groups, and that more would destroy the grandeur of the piece.

In compositions of all kinds, if any thing impertinent be introduced it will distract, and if of any amount, destroy the subject; the artist, therefore, must be cautious that his figures pay attention to the chief interest of the piece. If a figure be made to look out of the picture it becomes ludicrous: as in a picture by Rubens, where satyrs are represented dancing, a female looks at the spectator in a manner that adds considerably to the grotesque air of the whole; and in a picture by Titian, one of the panthers which draw the car of Bacchus fixes a single eye on the spectator, considerably enlivening the animal and the subdued part of the picture where it stands. This picture of "Bacchus and Ariadne" is in the National Gallery, as has been before noticed.

Variety of attitudes is to be studied for the sake of contrast: but rather than carry this too far, as Rubens has certainly done in his picture representing the Fall of the Damned at the Last Day, it would be much better to preserve the simplicity of the early painters, who seldom attempted more than a natural and unconstrained attitude.

Perhaps the shortest definition we can give of invention is, that it consists in arranging those ideas which the mind has amassed in its various studies, and in making fresh combinations out of old materials. Thus it will be evi-

dent, that an artist must not only study diligently the works of others, but should also be in the habit of much and appropriate reading; for it is plain, that he who gathers most ideas must have the greatest powers of invention, and the most refined invention can only proceed from a mind very highly cultivated.

Dryden, in his parallel between poetry and painting, gives, in his lively manner, the first place to invention; and, as absolutely necessary to both, he states, "yet no rule was, or ever can be given, how to compass it. A happy genius is the gift of Nature: it depends on the influence of the stars, say the astrologers; on the organs of the body, say the naturalists; it is the particular gift of heaven, say the divines, both Christians and Heathens. How to improve it many books can teach us; how to obtain it, none; that nothing can be done without it, all agree. *Tu nihil invitâ, dices faciesve, Minervâ.*"

Without invention, a painter is but a copier, and a poet but a plagiary of others. Both are allowed sometimes to copy and translate; but, as Fresnoy, on painting, tells us, "that is not the best part of their reputation."... "Imitators are but a servile kind of cattle, or at least the keepers of cattle for other men: they have nothing which is properly their own."

Under this head (Invention) is placed the disposition of the work, and such harmonious arrangement of all things, that the story of the picture may be perfect, and entirely devoid of whatever can distract the attention from the principal purpose of the artist.

CHIARO-SCURO.

THE extraordinary power which the eye possesses, of excluding all other things when bending its greatest strength of vision on any particular object, or part of an object, is highly interesting, and has here to be considered, being the leading principle upon which chiaro-scuro is based.

If the object be darker than the surrounding matter against which it is seen (in painting called the ground), it will, on a close scrutiny, appear encompassed by a faint halo of comparative light, affording, in the greatest darkness which is not total, a distinct view of the outline of the object, by a double operation. First, by the halo above mentioned; and secondly, by an appearance of increased or greater darkness at the edges of the object, than farther within the outline or near its centre. Should the object or figure be lighter than its ground, the converse of the whole takes place: for the ground which is in contrast with the object will then be darkest round its outline, and the edges of the object will be lighter than its centre. Although all feel the benefit, few are aware of this admirable property in the eye, dependant alone on its internal structure. That reflection from the back of the figure has nothing to do with it, may be shewn by attaching a small piece of dark paper to a larger piece not so dark, or the

contrary, and then looking on either with attention for a few moments when placed at a convenient distance, having in remembrance that the greater the distance the less distinctly will this effect be seen, on account of the intervening column of air, which always operates in the usual manner of aërial perspective.

This quality in the laws of vision is invaluable, when we consider the great safety and protection afforded by it in dubious light or almost darkness; doubtless given alike to all creatures that see (perhaps most powerfully to animals which prowl by night), and in which we perceive another proof of the infinite wisdom that the Almighty has employed in the construction of the universe, and of the incomprehensible means he has used for the safety and well-being of all his creatures. That these operations of the eye are mechanical, we believe cannot be doubted; but we have not yet met with any work in which some of these nicer phenomena of vision are reduced into any thing like a satisfactory theory; and perhaps they must ever remain amongst the innumerable circumstances which are as much beyond our finite capacities as the production of a blade of grass. Still we may gain much by studying the activity of the eye, its conclusive mode of reasoning, or rather the vast power it has, when cultivated, of forming true conclusions, apparently without the necessity of reasoning, proceeding from that power which we may call unconscious knowledge. These things, well considered, will advance the artist in the study of his arduous profession, much more rapidly than the common-place attentions which are too frequently paid to the mere manipulations of the art, as it is on these niceties of light and shade that

the picture has to depend for all that is to give life and piquancy to that portion of the effect which comes under the head of *chiaro-scuro*.

Without this knowledge, the artist must continually fall into error; for on many occasions he might be led to believe that shadows appear perfectly equal, or lights of the same brilliancy on a level surface. Knowing this to be the fact, and presenting them so, he would represent an unnatural appearance: for although abstractedly it is the case, yet we do not see them in this manner, and to the eye things only exist as they are seen; therefore, before we attempt to represent any thing, we must be aware of the manner in which we see it.

As we can only see distinctly that which appears in the centre of vision, all other objects are seen by indirect rays, consequently less distinctly. This may be one cause of the seeming inequality of shadows, lights, and colours; but the cause why two colours in opposition, or a light and shadow, should appear more intense by juxtaposition, does not so readily manifest itself. Indeed, so strongly does contrast bring out colours, that any very pale colour may be rendered visible by having its proper contrast near it, or invisible by the absence of the contrasting colour; and a set of graduating shades may be so arranged, that the sight will easily embrace in a direct view several of them at once, and the effect of increased and decreased intensity, where they join, will be apparent in all at the same time, taking the appearance of the delicate shadows in the flutings of a Doric column; but cover with two pieces of paper all the shades, except any one, and the shade tint under examination will be immediately restored to its

equal or level appearance: a condition which it always actually preserves, but which cannot be detected whilst the rest are visible *.

The words chiaro-scuro are commonly translated "light and shade;" but a better interpretation, perhaps, might be "light-obscure," as the term is used not only to express the lights and shadows of a picture, but also all those colours which have a sombre effect, and which cannot be called absolutely dark.

It is the intention of a good picture to tell its story distinctly and intelligibly, avoiding all things that will disturb the attention. This, without a good knowledge of chiaro-scuro, cannot be done; for, unless the artist strictly adheres to the leading principles of this department of the art, his labour will be thrown away. His first endeavour must be to obtain unity of light and shade, by so massing his lights and most agreeable colours on the chief part of the picture, that the eye may dwell on it with undisturbed satisfaction.

If in a picture a variety of objects are given of equal light, and scattered at regular intervals over the piece, it approaches in some degree the nature of a chess-board, where the alternations of black and white are so exact in size and power, that the eye wanders over the surface, finding not a single point of interest on which it can rest.

The quantity of dark shade usually given in painting is about one-quarter; another quarter is allowed for light, and the remainder for middle tint. But this rule is not absolute, depending on the nature of the subject and the impression to be conveyed.

* "Contraria juxta se posita, magis elucescunt."—*Cicero.*

Rembrandt allowed a much greater proportion to his dark tints, in order to gain the greatest possible brilliancy for his lights; and he carried his method so far, that the spectator is frequently impressed, on beholding many of his works, with the idea of a dungeon into which the light penetrates with difficulty, throwing an expression of sadness over the whole, sometimes unsuited to the subject, and always depressing to the feelings.

In many excellent pictures we see the greatest part occupied by middle tint, with very little of positive light or dark; and in others we find a preponderating quantity of light. Each of these methods is, of course, intended to convey particular feelings or impressions.

It is considered necessary to have two or three groups of light: but they must be varied in their size, form, and degrees of power, and the breadth of the shadows is to be so well preserved, that they may serve as places of repose to the eye, separating the groups of chiaro-scuro from each other.

Frederico Baroccio, Carlo Bonone, Guercino, the Carracci, and others, desirous of rivalling the great variety of tints which Correggio has employed, and so exquisitely blended by his pencil, depended to such an extent on the proper distribution of light and shade, that in order to obtain an accurate composition in their chiaro-scuro, they followed the method used by him, in forming small statues of clay or wax, arranging the positions, attitudes, and foldings of the draperies, grouping them according to the disposition they were to hold in the picture, and lastly, subjecting them to an artificial light, in order to choose the best effects.

When unity of light is carried to so great an extreme, as we often find in some of the pictures of Rembrandt (magical as they all are), repose is almost lost by the eye being continually recalled to this isolated light, and it is to prevent this singleness that other groups of light are admitted.

If the secondary light be made of nearly the same strength as the primary, it should not approach it in size. The rest are to be more diminished, both in form and size; and again from these should be spread out those accidental lights which prevent monotony in the shadows, add interest to the portions of the picture which without them might become insipid, and make the reposes useful in carrying forward the story, or in giving episodes in character with the whole.

By the term "repose" is simply implied those parts of the picture, either in deep shadow or middle tint, where lights, shadows, and colours, are so subdued, that the eye can rest upon them without fatigue, after the excitation produced by the brilliancy and effect of the principal parts.

However objects may be scattered throughout the picture, they are to be so grouped and collected together, that although each is to have its particular light and shadow, yet the lights should generally mass together as well as the shadows. To illustrate this, Titian refers to the effect on a bunch of grapes, where each grape has its own light and shade, yet it forms only one member of a mass, and the whole mass, considered as such has only one light side and one dark, causing an unity of effect that is always agreeable.

It is by masses of light that the eye is prevented from

dissipating its powers in a vague and unsettled wandering over the surface of the picture; and we must endeavour to fix it by a satisfactory combination of chiaro-scuro, by a harmony and contrast of colours, and by opposition of shade tint, or of obscure colours, which may have the same effect, sufficiently wide to prevent the masses of light from crowding into the eye, at the same time making what is called a repose between the lights. These groups of shadows are to be so managed that the unity of light may be preserved.

A picture may be considered as a collection of *foci*, or points of vision, holding their places in a series of gradations, and subject to one great controlling focus, the centre of effect; itself composed of innumerable *foci*, of various colours and degrees of light. These united make the chief light; the second and tertiary are to be subject, and inferior in power as they descend in the scale of the great total; and their minor, or accidental lights, should be so arranged, that they do not hurt the breadth or repose of each mass. So that we might almost pronounce each collection of light in itself a whole picture, but by its connexion and subordination making an essential part of a greater picture. Wouvermans, Wynants, Claude, Cuyp, and many others, finished their works so well in this respect, that any small portion taken out of one of their pictures would explain that it was a portion from the work of an eminent master.

The following extract from Sir Joshua Reynolds is too valuable to be omitted. "The Dutch painters particularly excelled in the management of light and shade, and have shewn in this department, that consummate skill which

entirely conceals the appearance of art. Jan Steen, Teniers, Ostade, Dusart, and many others of that school, may be produced as instances, and recommended to the young artist's careful study and attention. The means by which the painter works, and on which the effect of his picture depends, are light and shade, warm and cold colours. That there is an art in the management and disposition of those means will be easily granted, and it is equally certain, that this art is to be acquired by a careful examination of the works of those who have excelled in it.

"I shall here set down the result of observations which I have made on the works of those artists who appear to have best understood the management of light and shade, and who may be considered as examples for imitation in this branch of the art.

"Titian, Paolo Veronese, and Tintoret, were among the first painters who reduced to a system what was before practised without any fixed principle, and consequently neglected occasionally. From the Venetian painters Rubens extracted his scheme of composition, which was soon understood and adopted by his countrymen, and extended even to the minor painters of familiar life in the Dutch school.

"When I was at Venice, the method I took to avail myself of their principles was this: When I observed an extraordinary effect of light and shade in any picture, I took a leaf of my pocket-book, and darkened every part of it in the same gradations of light and shade as the picture, leaving the white paper untouched, to represent the light, and this without any attention to the subject or to the drawing of the figures. A few trials of this kind

will be sufficient to give the method of their conduct in the management of their lights. After a few experiments I found the paper blotted nearly alike. Their general practice appeared to be, to allow not above a quarter of the picture for the light, including in this portion both the principal and secondary lights; another quarter to be as dark as possible, and the remaining half kept in mezzotint, or half shadow.

"Rubens appears to have admitted rather more light than a quarter, and Rembrandt much less, scarce an eighth. By this conduct Rembrandt's light is extremely brilliant, but it costs too much; the rest of the picture is sacrificed to this one object. That light will certainly appear the brightest which is surrounded with the greatest quantity of shade, supposing equal skill in the artist.

"By this means you may likewise remark the various forms and shapes of those lights, as well as the object on which they are flung: whether a figure, or the sky, a white napkin, animals, or utensils, often introduced for this purpose only. It may be observed, likewise, what portion is strongly relieved, and how much is united with its ground; for it is necessary that some part (though a small one is sufficient) should be sharp and cutting against its ground, whether it be light on a dark, or dark on a light ground, in order to give firmness and distinctness to the work; if, on the other hand, it is relieved on every side, it will appear as if inlaid on its ground. Such a blotted paper held at a distance from the eye, will strike the spectator as something excellent for the disposition of light and shadow, though he does not distinguish whether it is a history, a portrait, a landscape, dead game, or any thing

else; for the same principles extend to every branch of the art.

"Whether I have given an exact account, or made a just division of the quantity of light admitted into the works of those painters, is of no very great consequence. Let every person examine and judge for himself: it will be sufficient if I have suggested a mode of examining pictures this way, and one means at least of acquiring the principles on which they wrought."

In the above quotation we find an objection to figures and objects appearing as if inlaid in their grounds, that is, to their being surrounded by light or shade, in such manner as to make them stand from those parts of the picture which join them. Many of the older masters did this to a great degree, and some of the pictures of Raffaelle, Leonardo da Vinci, and others, are not without this fault. Albert Durer, and the whole of his school, had it in excess. If we cannot have richness of chiaro-scuro and detail at the same time, it is better to sacrifice a portion of the latter, for the sake of the former, than to lose the splendour of effect, which is got by blending appropriate masses of light into masses of shadow.

Some relief is necessary; and our rule should be, to preserve the most beautiful or interesting portions of the picture in sufficient relief, and to sink the rest into the neighbouring masses of middle tint, or dark shadow; thus we gain a fulness and richness of chiaro-scuro, that holds a much higher rank in painting than a meagre detail of forms, and is more in accordance with the laws of vision: and as Sir J. Reynolds says, when recommending the higher excellences of painting, "If you compass them, and

compass nothing more, you are still in the first class. We may regret the innumerable beauties which you may want; you may be very imperfect, but still you are an imperfect artist of the highest order."

Perhaps the force of a well-constructed chiaro-scuro is most seen in the works of Correggio. Fuseli describes the harmony of Correggio as entirely dependant on his splendid management of light and shade, and that his effect owes nothing to the colouring, notwithstanding the exquisite hues he employed; and also compares those wonderful effects to the "bland central light of a globe imperceptibly gliding through lucid demi-tints into rich reflected shadows."

Correggio's compositions are always so complete, that his pictures, whether of the largest or smallest size, are perfect in unity of effect.

COLOURING.

Of the nature of colours, nearly all we know is, that they exist in various tinted rays, which combined make pure or colourless light. Could the artist be made acquainted with their physical or first cause, and how objects receive their colours, he might obtain some advantages, for they are not so splendidly and lavishly displayed throughout the works of Nature without some great meaning, otherwise their existence would seem only for our amusement instead of instruction.

The language of colours is infinitely expressive, and their expression and intention have to be well studied, for much important knowledge is often conveyed to the mind by the finer gradations of which they are capable. It is by colours that the nicest judgment is quickened, and by these nature acts upon our most refined perceptions and sympathies. We see health developed in colours that cannot be mistaken; we find the emotions of the soul expressed in appropriate tints; the warm flush of all the ardent passions, or the pallid tints of sickness, or of terror, with all the concurrent hues of sadness, impressively increased in the cold blue whiteness of the dead.

This analogy pervades the whole system of Nature. The gloom of the approaching storm is expressed by the same melancholy appearance, and its commencement is gently indicated to the spectator by a gradual diminution

of that healthy tint, which Nature possesses in her quietness. Again, the cheerful tranquility of an autumnal or summer's eve, is shewn by a harmonious arrangement of the richest and sweetest colours that can be found; all those which are generally pronounced to be unpleasing and expressive of the harsher feelings are banished, and the scene, whether at sea or shore, amongst mountains, rocks, or forest glades, appears to rejoice in one universal expression of gladness, such as colours only can indicate, and those in the hands of one who has long and successfully studied their use. They are, as Opie says in one of his lectures, "the sunshine of art that clothes poverty in smiles, and renders the prospect of barrenness itself agreeable, while it heightens the interest and doubles the charms of beauty."

A picture should be an assemblage of warm and cold colours, with all the gradations between the two, so disposed by the assistance of lights and shadows as to form large masses of tints, some opposing, others agreeing with each other. These are again divided into smaller masses, also opposing and agreeing; and this is continued, one within another, until every appearance of contrivance is lost, and the whole together takes that harmonious and artless appearance, which so exclusively belongs to natural effects. At the same time, the whole piece is so subjected to the first intention, that whatever impression or sentiment was to have been conveyed, is fulfilled by all things in the picture working together for one end.

If the subject be cheerful, the colours must be so, and the sombre greys, purple, black, dark reds, or brown, must be very sparingly used: these tints are better suited to subjects of a sullen or dismal aspect. If the picture is to

represent a cold atmosphere, no more warm colours are to be used than are sufficient to give force to the colder tints; and where a warm effect is to be produced, the contrary method must be pursued. The warm and glowing style of colouring is so generally esteemed, that Sir Joshua Reynolds gives directions in his admirable lectures for no other method.

In his notes on Du Fresnoy he observes: "The predominant colours of the picture ought to be of a warm mellow kind, red or yellow, and no more cold colour should be introduced than will be just enough to serve as a ground, or a foil to set off and give value to the mellow colours, and never should itself be a principal. For this a quarter of the picture will be sufficient. The cold colours, whether blue, grey, or green, are to be dispersed about the ground, or surrounding parts of the picture, wherever it has the appearance of wanting such a foil, but sparingly employed in the mass of light."

In another place he gives the same instructions. "It ought, in my opinion," he says, "to be indispensably observed, that the masses of light in a picture be always of a warm mellow colour, yellow, red, or yellowish white, and that the blue, the grey, or green colours, be kept almost entirely out of these masses, and be used only to support and to set off the warm colours; and for this purpose a small proportion of cold colours will be sufficient."

It cannot but be well understood by every one, that Sir Joshua, in these general rules, recommends that method which is most consonant to nature, and consequently best calculated to meet the public eye. With his knowledge, and the opportunities he had of seeing the best works, it is impossible but that he should be well aware, of all the

powers and properties of colours, and that by a judicious arrangement every variety of atmosphere, from absolute cold to its opposite, heat, might be with equal propriety represented, and with equal force.

It is well known to artists, that certain colours must be opposed or united to others, to produce any given or required effects: in other words, that particular combinations and oppositions of colours will produce certain results and impressions on the mind, founded in the propriety of all natural appearances. Their effect on the eye, considered only as an organ, is mechanical; for when the sight has been fatigued by resting long on one colour, the opposite colour (its contrast) serves as a repose, as darkness relieves the eye when weakened with too much light, and the converse. If the operations on the organs of vision be carried on by action upon substance, as fibre, &c., which appears to be most probable, then we may attempt to explain the effect of colours and their contrasts, by comparing the effect of a colour long seen, or seen in a large quantity, and the consequent weariness of the sight, to the fatigue which the muscles of the body feel, when some particular set have been long engaged in one continued exercise; and the sense of rest or relief that the eye gains, by contemplating the opposite to the colour which caused its weariness, may be compared to the rest and satisfaction of the body, on commencing an exercise which calls into action another set of muscles or limbs, the opposite to those already fatigued. Such is the relief the eye feels in contemplating purple after yellow, green after red, black after white, &c., or the reverse. Again, when many of these contrasts are brought together in a violent or harsh manner, the sight is distracted, and may, by a bad painting, be made to feel

something similar to the fatigue which is produced in the body by calling into violent action all the muscles of the frame at the same moment. We here speak only of that sight which has been cultivated, which is wide awake to all the charms of the visible creation, and not of that which sees things, and scarcely knows that it sees them.

Aware of the above facts, the artist gets rid of many difficulties in the construction of his picture. He must avoid monotony, or a too frequent repetition of the same colour; he will also be careful not to fill his picture too full of contrasts, the opposite error to monotony, but should reserve the powerful stimulus of contrast for those parts of his picture which he wishes to make of interest and to bring into life.

The skilful mixture of chiaro-scuro with colouring is irresistible; for the artist can with certainty fix the eye of the spectator on any part of his picture by these alone, even when divested of subject or story.

It is not an easy task to lay down an absolute theory of colouring, when we consider the different styles used by different masters, all of whom are considered good, yet differing so greatly that we can hardly institute any comparison between them.

Among the greatest colourists, we must enumerate Titian, Pordenone, Rembrandt, Rubens, Giorgione, Giacomo Bassano, Correggio, Jordaens, Tintoret, Paolo Veronese, Vandyke; and among the landscape painters, Claude Lorraine, Gaspar Poussin, Salvator Rosa, Hobbima, Rysdael, Both, and a few others, are to be included.

It was Titian's practice to have all his lights of a warm yellowish hue, as if enlightened by the setting sun; others have made their highest lights of a pure white: so that

a picture by Titian, as Sir J. Reynolds observes, makes all others that may happen to be near it, of a grey, or cold appearance.

In landscape, Titian's method has been followed by some with much success. His distances possess that sparkling and clear effect which is found under the best state of atmosphere, and his foregrounds have an individuality about them, which proceeds from the brown and earthy colours he employed in the front of his picture.

Claude Lorraine, who is generally esteemed as the head of the landscape painters, gained his brillancy in skies sometimes by an artifice that is not always sufficiently concealed. Where he has avoided it, his skies are equally splendid and more easily contemplated. We allude to his practice of occasionally placing a very dark object near the sun. This certainly produces the utmost light that colour is capable of giving; but the very intense opposition thus created is always painful if it make any approach to nature, and moreover, when intensely used, does much harm to the rest of the picture, notwithstanding the greatest skill which may be employed to counteract the evil. Many artists have followed him in this mode of creating a strong light in the sun or sky, but very rarely with his success; and where the success is not eminent the failure is invariably great.

The Venetians have always been considered the first colourists, although some of them, as Tintoret, Paolo Veronese, and a few others, were suspected by Sir Joshua Reynolds to have painted for no other purpose than to be admired for their expertness in the use of colours, and the display of that art which ought always to be concealed.

There is in the paintings of this school a brilliancy of light, supposed to spring from the use of pure and unmixed colours, in the first operations, which being repeated with a certain degree of transparency, produced that internal light so essential to brightness.

In his lights, Titian used rich and glowing colours, avoiding dark masses of shade in those portions of the figure which were naked. He always gave in his portraits the most power to those features capable of the greatest expression, as the mouth, the eyes, and nose. His colours were few and simple, but he knew well how to arrange them. It has been stated as his opinion, that any one desirous of becoming a good colourist must be well acquainted with three colours, *viz.* white, red, and black. He also knew, as well as Giorgione, the value of the three primitives, azure, red, and yellow; that the first belongs to shadows, that yellow is the representative (in colour) of light, and that red is their connecting link. This gradation is perceived to the greatest advantage in those fine evening skies, where we see the yellow tints of the horizon about the sun blending into rose tint, and this again into the azure of the zenith.

Leonardi da Vinci reduced the number of colours to two, white and black, the representatives of light and darkness; and between them made a gradation of six colours, as white, yellow, green, red, blue, black. Modern artists have, however, reduced this number to five, if we include white and black; but as these are generally not considered colours, there will only remain the three primitives, blue, red, and yellow. These only are called primitives, as with them all other tints and colours may be

made; and also, without any one of the three, nothing like the colour left out can be produced by the other two, even if we admit white and black. It is also remarkable, that the mixture of any two will make an opposite or perfect contrast to the colour left out; as with blue and yellow we obtain green, the contrast to red; with red and blue we have purple, the contrast to yellow; and lastly, by mixing red and yellow, orange is created, the contrasting colour to blue: again, if we mix the three together in certain proportions, black is the product; or mixed in other proportions, a shade tint is gained, suitable to any of the tints or colours which can be produced: and however the Venetian, Italian, and Flemish artists might theorize, we see in their practice that they understood the above scale in its utmost perfection; for in splendour, harmony, and judicious contrast, all that colours can do they have apparently achieved.

We have given below a table of contrasts, which may be varied *ad infinitum* by subdivision of tints, and also by difference in degrees of light, or depth of each tint, or its opposing colour.

Colours arranged in contrast.

YELLOW	Purple.
Yellow Orange	Blue Purple.
Orange	BLUE.
Red Orange	Blue Green.
Dark Orange *	Olive Green.
RED	Green.
Russet Brown †	Dark Green.
Red Purple	Yellow Green.
Dark Purple	Brown‡.

* Raw Umber. † Madder Brown. ‡ Vandyke Brown.

The cool tints are those made with blue and yellow, or blue and red; the warm colours are those composed of yellow and red. But many tints may have blue in them without being cold, as some of the greys, autumnal greens, &c.

The colours of the rainbow also seem to be made from the three primitive colours. The following is the order in which they stand, with Sir I. Newton's proportions, taking the whole at 360 parts:—Violet 80, Red 45, Orange 27, Yellow 48, Green 60, Blue 60, Indigo 40.

There are two modes by which grandeur in colouring may be obtained, which are widely different. One consists in reducing the colours nearly to a state of light and shade, according to the practice of the Bolognese school; the other, by preserving the colours in a forcible and brilliant condition, as practised by the artists of Florence and Rome. The distinct colours, blue, red, and yellow, of the Roman school, have a striking effect, and from their opposition make an impression of magnificence, widely differing from that which is caused by the monotonous tints of the Bolognian school: yet both are founded in simplicity, and it is hard to say which is the most impressive. These critiques on the different modes of grandeur in colouring agree essentially with similar opinions expressed by Sir J. Reynolds, from whom we shall borrow an extract on the different modes of attaining harmony. He says: "All the modes of harmony, or of producing that effect of colours which is required in a picture, may be reduced to three; two of which belong to the grand style, and the other to the ornamental. The first may be called the Roman manner, where the colours are of a full and strong body,

such as are found in the 'Transfiguration;' the next is that harmony, which is produced by what the ancients called the corruption of colours, by mixing and breaking them till there is a general union in the whole. This may be called the Bolognian style; and it is this hue and effect of colours which Ludovico Caracci seems to have endeavoured to produce, though he did not carry it to that perfection which we have seen since his time in the small works of the Dutch school, particularly Jan Steen, where art is completely concealed, and the painter, like a great orator, never draws the attention from the subject on himself. The last manner belongs properly to the ornamental style, which we call the Venetian, being first practised at Venice; but it is perhaps better learned from Rubens. Here the brightest colours possible are admitted, with the two extremes of warm and cold, and those reconciled by being dispersed over the picture, till the whole appears like a bunch of flowers.

"As I have given instances from the Dutch school, where the art of breaking colour may be learned, we may recommend here an attention to the works of Watteau for excellence in this florid style of painting.

"To all these different manners there are some general rules that must never be neglected. First, that the same colour which makes the largest mass, be diffused, and appear to revive in different parts of the picture; for a single colour will make a spot or blot. Even the dispersed flesh colour, which the faces and hands occasion, requires a principal mass, which is best produced by a naked figure: but where the subject will not allow of this, a drapery approaching to flesh colour will answer the purpose; as in

the 'Transfiguration,' where a woman is clothed in a drapery of this colour, which makes a principal to all the heads and hands of the picture: and for the sake of harmony, the colours, however distinguished in their light, should be nearly of the same simple unity in their shadows; and to give the utmost force, strength, and solidity to the work, some part of the picture should be as light, and some as dark as possible. These two extremes are, then, to be harmonized and reconciled to each other.

"Instances where both of them are used may be observed in two pictures, which are equally eminent for the force and brilliancy of their effect. One is in the cabinet of the Duke of Rutland, and the other is in the chapel of Rubens at Antwerp, which serves as his monument. In both these pictures he has introduced a female figure dressed in black satin, the shadows of which are as dark as pure black, opposed to the contrary extreme of brightness, can make them.

"If to these different manners we add one more, that in which a silver grey or pearly tint is predominant, I believe every kind of harmony that can be produced by colours will be comprehended. One of the greatest examples in this mode is the famous 'Marriage at Cana,' in St. George's Church at Venice," (now in the Louvre in Paris), "where the sky, which makes a very considerable part of the picture, is of the lightest blue colour, and the clouds perfectly white: the rest of the picture is in the same key, wrought from this high pitch. We see likewise many pictures of Guido in this tint; and, indeed, those that are so are in his best manner. Female figures, angels, and children were the subjects in which Guido more particu-

larly succeeded; and to such the clearness and neatness of this tint perfectly corresponds, and contributes not a little to that exquisite beauty and delicacy which so much distinguishes his works. To see this style in perfection we must again have recourse to the Dutch school, particularly to the works of the younger Vandervelde and the younger Teniers, whose pictures are valued by connoisseurs in proportion as they possess this excellence of a silver tint. Which of these different styles ought to be preferred, so as to meet every man's ideas, would be difficult to determine, from the predilection every one has to the mode which is practised by the school in which he has been educated; but if any pre-eminence is to be given, it must be to that manner which stands in the highest estimation with mankind in general, and that is the Venetian style, or rather the manner of Titian, which simply considered as producing an effect of colours, will certainly eclipse with its splendour whatever is brought into competition with it. But, as I hinted before, if female delicacy and beauty be the principal object of the painter's aim, the purity and clearness of the tints of Guido will correspond better, and more contribute to produce it, than even the glowing tint of Titian."

The following passage from Mr. Burke's work on the "Sublime and Beautiful" contains many excellent hints for a delicacy in the use of colours that we do not remember to have seen elsewhere, and which are worthy of much consideration. Speaking of beauty in colour, he says: "As to the colours usually found in beautiful bodies, it may be somewhat difficult to ascertain them, because in the several parts of nature there is an infinite variety.

However, even in this variety, we may mark out something on which to settle. First, the colours of beautiful bodies must not be dusky or muddy, but clean and fair. Secondly, they must not be of the strongest kind. Those which seem most appropriated to beauty are the milder of every sort; light greens, soft blues, weak whites, pink reds, and violets. Thirdly, if the colours be strong and vivid, they are always diversified, and the object is never of one strong colour: there are almost always such a number of them (as variegated flowers), that the strength and glare of each is considerably abated. In a fine complexion there is not only some variety in the colouring, but the colours, neither the red nor the white, are strong and glaring: besides, they are mixed in such a manner, and with such gradations, that it is impossible to fix the bounds. On the same principle it is, that the dubious colour in the necks and tails of peacocks, and about the heads of drakes, is so very agreeable. In reality, the beauty both of shape and colouring are as nearly related as we can well suppose it possible for things of such different natures to be."

In concluding this division of our work we must remind the student, that without a judicious and extremely careful use of contrasts, he cannot obtain any thing of purity or delicacy in colouring. Astronomers are now aware that the true colour of a star can only be known in the presence of its contrast; yet many ages had passed before they found out this simple fact, namely, that the class to which a delicate colour belongs can only be known by bringing near it the tint or colour from which it is farthest removed in its nature: a circumstance long known to the best artists, and confirmed by the following experiment, which

also proves, at the same time, that there are multitudes of colours whose very existence is unknown to us, until their contrasts bring them within the scope of our limited powers of vision.

When a fine gradation of colour has been made on paper and carried into pure water, that part which is invisible, having no other apparent tint than clear, unsullied paper, will appear, on placing the opposing or contrasting tint by its side, of a wedge-like shape. The broadest part will be where the tint which is brought into sight is strongest; the point will be the weakest, and will touch the contrasting colour; and the whole wedge of colour will again vanish on taking away the contrast. If the colour be yellow, that is gradually diminished into white paper, the purple, its contrast, should be placed on a separate paper, cut to a perfectly straight edge, and then placed on the whole length of the yellow, and where the colour may be supposed to exist.

PICTURESQUE.

THE most general meaning given to the term "picturesque" is, that wildness which nature exhibits in her neglected state; as the unrestrained growth of vegetable matter, pools of water, forsaken gravel-pits, ruins of castles and abbeys, with all their rich accompaniments, and that appropriate variety of forms, which is implied by the word "picturesque."

But if we take this word in a sense often given to it as applicable to any subject having sufficient material for an agreeable picture, it might be necessary to include every natural, and very many artificial objects; for it is remarkable, how the most unpromising scenes may be wrought into good pictures by proper attention to the chiaro-scuro, especially in the skies.

Gerrard Lairesse says, that a good sky in painting is a proof of very great talent: and certainly much depends on it, as a view in the fens or marshes, where the distance is bounded by a straight line, and the front a level plain, will become picturesque with a judiciously arranged sky and suitable light and shade upon the land; or the most formal piece of architecture on a smooth lawn, with other objects equally prim, may be made into an agreeable picture, merely by the aid of a powerful chiaro-scuro, and that infinite variety of natural colours, with their grada-

tions and oppositions, which may at all times be called to our assistance in subjects of difficulty; for where nature has done nothing every thing rests with the artist; even where nature has been most bountiful, he must well consider before he can copy what he sees and form it into a complete picture.

Whether the term "picturesque" can be applied to the highest class of painting has been disputed. Sir J. Reynolds, speaking on this subject, says: "The works of Michael Angelo and Raffaelle appear to me to have nothing of it, whereas Rubens and the Venetian school may almost be said to have nothing else. Perhaps 'picturesque' is somewhat synonimous to the word 'taste,' which we should improperly apply to Homer or to Milton, but very well to Pope or Prior. I suspect that the application of these words is to excellencies which are incompatible with the grand style." But, in conclusion, he adds, that he is not quite certain that the restrictions he has made to the general application of the word "picturesque" are quite valid.

Simplicity and variety constitute the leading principle of the picturesque. To obtain grandeur there should be much simplicity. Where variety abounds it approaches, and generally becomes, what is termed beautiful in landscape.

Among the best painters of sylvan scenery we must reckon Rysdael, Hobbima, Waterloo, and Swanevelt. The number of objects which they brought into their pictures was limited only to such incidents as the woods afforded. Sometimes a cottage or a mill partially appeared, with a foot-path, a stile, a mill-race, or clear pool of still water

underneath the shade of some huge oak, inverting the landscape in its darkened mirror. All these things they duly studied, and gave to them the truth and finish of unadorned nature.

It would almost seem that a distinct faculty is required to perceive and comprehend those ideas which are called picturesque; for the great Dr. Johnson has shewn, that reading, however vast, will do little towards creating that ardent love and admiration for the Creator's grandest works, unless there be a predisposing cause, which we sometimes call "taste," or "genius," or an "additional faculty." In his journey through the Western Isles of Scotland, he says: "The hills are almost totally covered with dark heath, and even that appears checked in its growth. What is not heath is nakedness; a little diversified now and then by a stream rushing down the steep. An eye accustomed to flowery pastures and waving harvests is astonished and repelled by this wide extent of hopeless sterility. The appearance is that of matter incapable of form or usefulness, dismissed by Nature from her care, disinherited of her favour, and left in its original elemental state, or quickened only with one sullen power of useless vegetation." How much of happiness and real enjoyment the good Doctor lost by not possessing that "additional faculty," I leave those to say, who have viewed the splendid and sublime wastes of Scotland under a different feeling.

Strictly speaking, it will rarely happen that embellished scenery can be admitted among the truly picturesque. The pencil prefers those scenes where Nature has been undisturbed for ages, where all things are untrimmed.

The figures in such scenes must be peasants in their usual garb; cattle, such as cattle naturally are, not the high-bred prize ox, nor the elegant race-horse saddled ready for a start with his party-coloured rider *.

When buildings occur, they should shew as little of art as possible; therefore the humble cottage, with its straw or heathy thatch overgrown with weeds and mosses, is more picturesque than the finished mansion; yet the finest specimens of architecture when in ruins, and decorated with those adjuncts which nature in a series of years will invariably supply, are to be classed among the most picturesque subjects.

In England, embellished scenery possesses a grace which no other country can boast of, and has great claims to admiration on account of its utility as well as pictorial beauty.

The oak, unequalled in other countries, is here a striking object, and the richest ornament of our parks or forests when varied by all its brilliant autumnal tints, whether on the foreground or in the distance, where the forms taken by large masses of oaks are of the noblest kind. In every other species of vegetable life there is a freshness of verdure in the spring, and in the autumn a rich assemblage of colours, which cannot be surpassed, and are rarely seen elsewhere. This, together with the protection, which private property has received from our insular position, affording an opportunity of improvements being continued through successive generations, with all the consequent additions of experience, has given to English park-scenery

* All animals, however high their condition, become picturesque when in violent action.

much of the picturesque and of grandeur, if not of the sublime. In many parks trees have been allowed to stand until they have assumed all the pictorial qualities that decay generally gives to them. A naturalist (Lawson on 'Orchards'), lamenting in feeling language the decay to which trees are subject, among other things speaks of hollow and rotten trees, with dead arms, withered tops, curtailed trunks covered with moss, and dying branches, &c. Had he been seeking for picturesque objects his tone would have been different; for it is to be regretted, that utility is not always the test of the picturesque.

It does not follow, because a tree is dead or disfigured, that it is picturesque; but it is so rather on account of the scenery with which it is associated. In forests, where we mostly find such objects, we also find all the proper accompaniments. In village scenery we frequently see the old cottage or farm-house sheltered by their coëval trees, and it is the whole together which makes the picturesque. A dead tree placed on a smooth lawn, in front of a handsome mansion, would not be tolerated by its most enthusiastic admirers, being here too much out of place.

Among trees, the ash, the mountain-ash, the birch, and abele, are the most elegant. Virgil justly, when speaking of the ash, calls it "*fraxinus in sylvis pulcherrima*," the most beautiful of the forest; but as a picturesque tree it will not compare with the oak, particularly when in a state of decay or aged: in health and full vigour gracefulness is its characteristic.

The beech, in its most perfect condition, has a grandeur to which the ash and the elm never attain. Its extended and leafy head, supported upon a trunk that is finely

formed, often variegated with moss and other excrescences, upon a bark which is always of an agreeable hue, together with other strong features, make it well worthy the attention of the draughtsman.

The elm partakes much of the oak in appearance, and unites some of its grandeur with a lightness of foliage peculiar to itself. Usually growing upright and to a great height, it gives dignity to the landscape around it.

The white poplar with large leaves (better known as the abele) is a magnificent ornament either to park or forest. It has the light gracefulness of the ash, united to the wide-spreading and massive dignity of the beech. The trunk most frequently rises to a great height before any branches are thrown out; the bark is of light ashey grey, generally banded with dark patches in the manner of the birch. The mosses which grow on the abele are always of a rich colour, that contrast well with both foliage and bark, and we have no inhabitant of the forest that surpasses it in height, grandeur, or beauty of form, when it is pleased with the soil on which it stands; but the softness of the timber will always prevent it from being a favourite in plantations, where the *utile* is preferred to the *dulce*.

We are much surprised how this tree should have escaped the acute notice of Mr. Gilpin in his excellent work on forest scenery, whilst he was describing with such accuracy other poplars of much less beauty.

Our limited space will not permit us to notice the whole list of trees and shrubs, which are all worthy of attention, each for some peculiarity of character or colour, especially in autumn, when a portion of their leaves have fallen, and the rest become tinged with the hues of the season: as the

light tawny of the plane-tree; the varied yellows, yellow greens, and browns of the oak; the bright yellow of the hazel; dull brown of the sycamore; pale yellow of the maple; tawny green of the elm; the pale lemon yellow of the ash; and in late autumn, the deep and bright reds of the beech and wild cherry-tree, &c.

At this season of solemn grandeur we see displayed the richness and grace of those combinations and groupings, both in form and colour, which Nature uses in her forest scenes. Such impress the mind with a sense of awe, of which the Druids were well aware, when they established their sacrifices and their divinities in the woods.

Nor dissimilar are the sensations occasionally felt in passing over extensive mountains and wastes, where the wanderer finds himself separated from the world, the sole tenant of the wilderness, holding communion with a solitude and silence almost oppressive. But it is in these places that the artist and poet must seek the sublime as well as the most picturesque impressions, not in formal street perspective, with a reiteration of doors and windows, or amidst the artificial groves of the landscape gardener.

Amongst the sources of the picturesque, which belong almost exclusively to Great Britain, are those effects produced by the occasional heaviness of our atmosphere, arising from the natural humidity of the climate, giving to distances an obscurity in some places, whilst at the same moment, in others, there will be a distinctness equalling the clearness produced by an Italian sky. This allows to artists the liberty of enlightening such parts of the distance as are agreeable in character: others, which are not so, may be suffused with vapour, or hidden by a partial shower

of rain, or rendered gloomy by the shadows of clouds. That haziness, so frequent in our islands, which, without destroying, throws a thin veil over the whole of harmonizing power, gives to the picture a repose, frequently more grateful to the eye than is effected by a brilliant atmosphere, where the sharp outlines and distinct colours often produce a painful species of detail throughout the landscape.

The months of September, October, and November, shew the most picturesque effects. In the morning and evening we have then more of what the artist calls air-tint. We see masses of shadow cast into large breadths by the lowness of the sun, creating a rich and quiet tone of repose wherever they fall. Their richness is occasioned by the faint marking of colours and forms, when seen through the deep misty greys of an autumnal morn or eve; yet so harmoniously blended, as to leave unbroken and undisturbed the necessary repose of the picture. The lights are more brilliant by this contrast, and mark with the greater precision the character of every object.

The colours of vegetation, in these months, partake more of light than the deep monotonous greens of early summer, when the woods and fields wear all one livery, and of a colour, although agreeable, not gay. In the autumn the colours are of a more varied and cheerful nature. Even the colours of buildings seem to have changed with the season; and we now find in views of towns or villages, when seen not too far off, all the modifications of red, brown, orange, buff, greys, white, &c., contrasted by a universal pearly shade-tint, which throws a whole city into differently-shaped masses of chiaro-scuro, most frequently

so conveniently disposed, that the eye sees with remarkable precision, objects which, under a more elevated sun, become in a manner indistinct, from their multitude, and the distracting glare of light which in one universal stream descends on the whole scene.

We find in mountain scenery a great diversity of outline, but not all equally good. When seen against the sky, they should have nothing either formal or fantastic, but be continued in irregularly undulating lines, which are always beautiful, and occasionally broken by abrupt or precipitous descents. Amongst the finest forms the pyramidal takes the lead, being that which unites in itself the first principles of grandeur, strength, and magnitude. In painting, these lines should not be too distinctly marked, but partake of that filmy texture which belongs to distant objects. The pyramidal form may also be reversed and made very picturesque; as, for example, the straight line of a bridge crossing the inclined lines of a deep ravine, which meet towards the bottom of a picture; but this can only be used with effect near the foreground or in the middle distance.

Nothing can be more beautifully picturesque than the light floating colours of the mountains. They are continually changing, sometimes from a pale sunny yellow to the hue of the peach bloom, and this converted most magically into the violet and azure of the mountain shades; the whole again reconverted with variegated splendour into lights, shadows, and colours equally illusive, by the prismatic effect of some thin vapour arising from the earth. The shadows of clouds passing over the sides of mountains add also greatly to their grandeur, by producing that breadth and unity of shade-tint so essential to their character.

The features in a foreground, to be picturesque, should be strongly marked. What is picturesque in a distance is not so on a foreground, where the colours and forms are well made out. Objects on the foreground, to be picturesque, should be so disposed, that their lights, shadows, colours, &c., may contrast agreeably with those of the distances.

Where a large mass of shade is wanted, trees will supply it; if warm browns or greys, the trunks of trees or rocks may be made subservient; or if the grey or azure of the distant tints is to be opposed, the autumnal colours of foliage may be used, of which there is an abundant choice.

In broken earth a great variety of ochres and browns are to be found, and for red, black, white, brown, and grey, cattle will furnish all that can be required; or for the more positive colours, as scarlet, yellow and blue, figures clothed in these tints and in appropriate positions and action, can be introduced to fill up the arrangement of the picture.

The sea with its shores is an inexhaustible study, presenting in itself an endless choice and variety of effects. In certain changes of the atmosphere there is a beautiful mingling and interchanging of colours on the surface of the ocean, breaking and making agreeable sometimes even the monotony of a calm.

With an increase of wind, the same scene, which before was merely pleasing becomes highly interesting. The waves are crested with foam, vessels take every possible attitude, and receive all the varieties of light as the shades occasioned by the clouds pass away. The distant and dark blue sea assumes, as it approaches, an olive green, sometimes a drab colour, or other hues of gayer tint,

with every imaginary shape and size of waves rolling in ceaseless change, making the sea alone, even without the accompaniment of sands or cliffs, a highly picturesque subject.

A storm at sea adds sublimity to the picturesque. Those enormous collections of clouds, the harbingers of thunder, the subdued pale grey lights which edge the under-clouds, the lurid tints, as of flame seen through a black veil, the scattered and torn fragments in the zenith hastening to a junction with the larger masses, and the darkened colours of the sea in its agitation mingling with the sky, contain all the elements of the sublime. Here even a ship of war of the largest class seen moving through the flying foam, with its light sails spread against the deepening gloom, its tall spars bending before the tempest, is grandly picturesque; when alone, and at rest in a quiet harbour, it has not the least claim to the term.

Marine views may have their interest greatly increased by rocks, sands, and their characteristic figures; boats on shore, birds which frequent the ocean, sea-weed, pieces of wreck, nets, baskets, fishermen's huts, and all their usual accompaniments.

BEAUTY, GRACE, AND EXPRESSION.

The opinions of all civilized nations have tended to establish certain forms and colours as beautiful, and these most generally are founded on the perfection of the object to which the term is applied.

Some will not admit the existence of abstract beauty. Amongst them we find Voltaire, who very unfairly omits every thing that might go against his opinion. He states the whole matter as entirely relative; that things esteemed beautiful in Paris might not be so esteemed in London, and that a toad will consider the perfection of beauty as resting among toads, &c. He also descends to sarcasm; but sarcasm is not argument.

The Greeks, when establishing their ideas of beauty in the human figure, appear to have taken for their guide a very simple rule as a first principle, and refined on it until they were enabled to produce those perfections of form and expression, which have been allowed through successive ages as standards of beauty, of grace, and sublimity. They saw that, in the human countenance, a depressed forehead, a flat nose, and projecting mouth, is too nearly allied to the brute formation, and that a gradation might be traced from the lowest animals, through the dog, monkey, ouran-outang, Negro, and Tartar, up to the European, or, as termed by physiologists, the Caucasian variety, in the

great family of mankind. They found in the Caucasian variety, that the head above the eyes is large, and well developed, particularly towards the front and in the forehead, and that the face comparatively is small, and falls perpendicularly from the cranium, the face oval, nose moderately prominent, the mouth small, the chin well rounded, &c. To these forms they found added an intellectual energy and moral perception, capable of such extensive cultivation and refinement, as to warrant them in supposing that, as the facial line is elevated, in the same proportion intelligence increases. Following this rule they have given to those heads, which they wished to possess the greatest dignity, a countenance nearly perpendicular; and in their statues of the gods they have carried this rule so far as to make the forehead project beyond the face, thus attaining the farthest possible remove from the formation of the lower animals.

It is this refinement which is termed ideal beauty, and which we can only well understand by examining their statues, where we shall find that perfections, which never exist altogether in one individual, are collected into a perfect whole, making an aggregation of beauties which are constantly to be found in nature, but never altogether in the most favoured individual.

From this it appears that the Greeks did not go upon vague notions; they seem to have worked upon a great leading principle, and by doing so have gained the suffrages of the whole civilized world. And we find that beauty, whether abstract or relative, is judged, by that created being which possesses the greatest reasoning power, to consist in those forms capable of the highest

state of intellect, and also best fitted to perform all the duties of its position in the world, by being composed of those intermedial forms which are equally removed from redundancy or attenuation.

Thus we might be justified in asserting the existence of abstract beauty. Or it may be asked, whether the opinion of the being best fitted to reason and judge shall have weight, or whether by subtilizing we are to grant an equal right to those beings which have no reason, descending in this extraordinary spirit of liberality through the first dawnings of animal or vegetable life into lifeless matter, as no point can be assigned where we are to stop, until we might conclude with certain philosophers, that the qualities of all material things are ideal, and in this manner arrive at the monstrous absurdity that it is quite indifferent whether an object be loathsome or lovely.

It is certain that, in all the species of created beings, there are particular states of perfection which may be called beautiful for want of a better term. But it is also certain, that some beings are more perfect than others, and that man surpasses them all; therefore, in the human figure are we to look for those lines and forms which we call beautiful, a word for which the Greeks, having no equivalent, used others, comprehending many more excellencies than our own. As Sir J. Reynolds observes: "It is from reiterated experience, and a close comparison of the objects in nature, that an artist becomes possessed of the idea of that central form, if I may so express it, from which every deviation is deformity. But the investigation of this form, I grant, is painful: and I know but of one method of shortening the road; this is, by a careful study of the

works of the ancient sculptors, who, being indefatigable in the school of nature, have left models of that perfect form behind them which an artist would prefer as supremely beautiful, who had spent his whole life in that single contemplation.

"This laborious investigation, I am aware, must appear superfluous to those who think every thing is to be done by felicity and the powers of native genius. Even the great Bacon treats with ridicule the idea of confining proportion to rules, or of producing beauty by selection. A man cannot tell, says he, whether Apelles or Albert Durer were the more trifler, whereof the one would make a personage by geometrical proportions, the other by taking the best parts out of divers faces to make one excellent. * * * The painter, he adds, must do it by a kind of felicity and not by rule.

"It is not safe," continues Sir Joshua Reynolds, "to question any opinion of so great a writer and so profound a thinker as undoubtedly Bacon was; but he studies brevity to excess, and therefore his meaning is sometimes doubtful. If he mean that beauty has nothing to do with rule, he is mistaken. There is a rule obtained out of general nature, to contradict which is to fall into deformity. Whenever any thing is done beyond this rule it is in virtue of some other rule, which is followed along with it, but which does not contradict it. Every thing, which is wrought with certainty, is wrought upon some principle; if it is not, it cannot be repeated.

"If by felicity is meant any thing of chance or hazard, or something born with a man and not earned, I cannot agree with this great philosopher. Every object which

pleases must give us pleasure upon some certain principles; but as the objects of pleasure are almost infinite, so their principles vary without end, and every man finds them out, not by felicity or successful hazard, but by care and sagacity.

"To the principle I have laid down, that the idea of beauty in each species of beings is an invariable one, it may be objected, that in every particular species there are various central forms which are separate and distinct from each other, and yet are undeniably beautiful; that in the human figure, for instance, the beauty of Hercules is one, of the Gladiator another, of the Apollo another, which makes so many different kinds of beauty.

"It is true, indeed, that these figures are each perfect in their kind, though of different characters and proportions, but still none of them is the representation of an individual but of a class. And as there is one general form which, as I have said, belongs to the human kind at large, so in each of these classes there is one common idea and central form, which is the abstract of the various individual forms belonging to that class. Thus, though the forms of childhood and age differ exceedingly, there is a common form in childhood and a common form in age, which is the more perfect as it is more remote from all peculiarities. But I must add, further, that though the most perfect forms of each of the general divisions of the human figure are ideal, and superior to any individual form of that class, yet the highest perfection of the human figure is not to be found in any one of them. It is not in the Hercules, nor in the Gladiator, nor in the Apollo, but in that form which

is taken from all, and which partakes equally of the activity of the Gladiator, of the delicacy of the Apollo, and the muscular strength of the Hercules; for perfect beauty in any species must combine all the characters which are beautiful in that species. It cannot consist in any one to the exclusion of the rest; no one therefore must be predominant, that no one may be deficient."

In another place Sir Joshua adds: "Thus, among blades of grass or leaves of the same tree, though no two can be found exactly alike, the general form is invariable. A naturalist, before he chose one as a sample, would examine many; since if he took the first that occurred, it might have by accident, or otherwise, such a form, as that it would scarce be known to belong to that species he selects, as the painter does the most beautiful, that is, the most general form of perfect nature."

It was the opinion of Mr. Burke, that smoothness is of great importance in the constitution of every beautiful object. He says: "It is a quality so essential to beauty, that I do not now recollect any thing beautiful that is not smooth. In trees and flowers smooth leaves are beautiful; smooth coats of birds and beasts are beautiful, &c. A very considerable part of the effect of beauty is owing to this quality, indeed the most considerable; for take any beautiful object, and give it a broken and rugged surface, and however well formed, if it want not this, it becomes more pleasing than almost all the others without it. This seems to me so evident, that I am a good deal surprised that none who have handled the subject have made any mention of the quality of smoothness, in the enumeration of

those that go to the formation of beauty; for, indeed, any ruggedness, any sudden projection, any sharp angle, is in the highest degree contrary to that idea.

"But as perfect beautiful bodies are not composed of angular parts, so their parts never continue long in the same right line. They vary their direction every moment, and they change under the eye by a deviation continually carrying on, but for whose beginning or end you will find it difficult to ascertain a point. The view of a beautiful bird will illustrate this observation. * * * I have before me the idea of a dove; it agrees very well with most of the conditions of beauty. It is smooth, and its parts are (to use that expression) melted into one another: you are presented with no sudden protuberance through the whole, and yet the whole is continually changing. * * * I can strengthen my theory on this point, by the opinion of the very ingenious Mr. Hogarth, whose idea of the line of beauty (the serpentine) I take in general to be extremely just; but the idea of variation, without attending so accurately to the manner of the variation, has led him to consider angular figures as beautiful. These figures, it is true, vary greatly, yet they vary in a sudden and broken manner; and I do not find any natural object which is angular, and at the same time beautiful. Indeed, few natural objects are entirely angular."

The ancients (we speak of the times of Apelles) divided painting into five principal parts; invention, symmetry, colour (including chiaro-scuro), expression, and disposition: yet they appear to have thought a sixth necessary, or rather essential, to the completion of the whole; for however correctly the five first were observed, without grace, which

we have termed the sixth, they deemed the whole of any work of art imperfect. This grace was to be obtained by a becoming propriety in every separate point, and again, by a concordance or mutual agreement of all the five.

Grace seems to be a part of beauty, for it is certainly the highest state of perfection to which whatever is beautiful can arrive. It makes beauty more lovely by a delicacy of expression in action, form, and mind. It is a quality readily perceived but difficult of explanation, without the presence of those works which contain the only language by which we can understand this indescribable perfection, as a careful contemplation of the Medicean Venus, the Apollo Belvidere, the Antinous, and others, will best shew. In these we shall find lines possessing more or less of the ellipsis, in such endless, varying forms, from every point of view, that the geometrician and writer are equally baffled in attempting a description of them.

Grace requires simplicity; constraint and affectation destroy it. Almost all the actions of children were thought by Sir J. Reynolds to possess this quality, and that gracefulness left them when the lessons of the dancing-master commenced. In support of this opinion he might have quoted Cicero, who, in his first book *De Oratore*, adds, "Roscius often says in my hearing, that a graceful propriety is the principal point of art, and this is the only thing which cannot be produced by art."

Grace may be considered as the harmonious accordance of the action with the agent: therefore, that grace which is becoming in the female form would be unsuitable to the male; in man it must have something more of dignity.

This nice distinction was so well understood by Raffaelle, that he may be said to have possessed the whole quality in its fullest extent; and the following passage, taken from Mr. Roscoe's excellent translation of the history of painting in Italy by the Abate Luigi Lanzi, gives us a great idea of the power that Raffaelle had attained in this essential and fascinating department of the art. "Another quality, which Raffaelle possessed in an eminent degree, was grace, a quality which may be said to confer an additional charm on beauty itself. Something might, perhaps, be advantageously added to the forms of his children and other delicate figures which he presented, but nothing can add to their gracefulness; for if it were attempted to be carried further, it would degenerate into affectation, as we find in Parmegiano. His Madonnas enchant us, as Mengs observes, not because they possess the perfect lineaments of the Medicean Venus, or of the celebrated daughter of Niobe, but because the painter, in their portraits and in their expressive smiles, has personified modesty, maternal love, purity of mind, and in a word, grace itself. Nor did he impress this character on the countenance alone, but distributed it throughout the figure in its attitude, gesture, and action, and in the folds of the drapery, with a dexterity which may be admired but can never be surpassed. His freedom of execution was a component part of his grace, which indeed vanishes as soon as labour and study appear; for it is with the painter as with the orator, in whom a natural and spontaneous eloquence delights us, while we turn away with indifference from an artificial and studied harangue."

Grace should be extended to expression. A figure, a statue, or a plant, may stand gracefully, or they may be moved or represent motion gracefully; but it is only when expression is added to grace, and both superadded to beauty, that the latter becomes perfect.

Expression should be held as the highest department of painting. Some give to invention the first place, whilst others grant it to composition: yet, without expression, the finest works of art are nothing more than a heap of lifeless matter; with it, the representation of the most insignificant insect or plant starts into life, and we regard it with corresponding feelings.

In short, expression is to be found in all things. Things inanimate express their qualities, the state of atmosphere, and other adventitious circumstances under which they are seen. In human beings and the lower animals expression displays passion under its two great divisions, pleasure and pain, to one of which every sentiment or emotion approaches more or less remotely. It is not sufficient to represent them correctly in outline, for much more is required to show that the draughtsman is not a mean observer of nature. The animal must have life: some passion, active or passive, must be represented, and this must be carried throughout. Not only the eyes, nostrils, mouth, ears, carriage of head, neck, limbs, and body, are to feel the identical passion, but even the very hair must denote the quiescent or active intention of the animal's feelings; and this not in a vulgar, extravagant, or confused style, but with that energy of which Nature just infuses a quantity sufficient to awaken every nerve as much as the

occasion requires, in like manner as she adjusts the strength of a tree or plant, from the principal stem upwards to the finest ramifications, where strength only is wanted to support a single leaf.

It is in expression that painting shews its greatest power. In poetry the feelings have to be moved by an indefinite, and sometimes a vague phraseology: and as no two imaginations are alike, so will the images vary in different minds; for the best poets can do no more than refer to "monuments of Grecian art," with "ivory limbs," &c., from Ovid downwards.

In sculpture we seek in vain for those pale or lurid colours indicating the angry passions, or those more harmonious which belong to kindness and all our better feelings. These have their cheerful and happy hues, which no language but that of colours can attempt to express. The artist makes no reference to "lilies and roses," but uses the infinity of tints as they are used by Nature, for expression and distinction.

Sir Thomas Lawrence, in his Address to the Students of the Royal Academy in December 1821, speaking on expression, says: "A knowledge of beauty is essential to that of truth. The gentlemen who are candidates in historical painting I would earnestly advise, when inventing their composition, not to be led away by an attention only to a play of line and an harmonious adjustment of parts, but to let truth, nature, and simplicity be their guide. It is well known that the happiness of life is often lost by an inattention to known and vulgar truths: and in the same manner are the beauties of art missed by overlooking those simple and affecting incidents which Nature presents to us

every day. When inventing, gentlemen, I would advise you not to follow this or that great master, but to consider your subject as it would have taken place in reality, rendering every thing subordinate to expression, for it is by expression alone we can touch the heart. 'He who would make us feel, must feel himself,' says a high authority, and the experience of every day justifies the truth of the assertion. To attain the powers of expression, I would recommend to you to make it your constant pursuit every day and hour of your lives, to concentrate your thoughts toward that point; for whatever tends to fix and concentrate our thoughts elevates us as thinking beings. Leonardi da Vinci, Raphael, Domenichino, and Rembrandt, are the four great masters of expression; and from the sketches of these in existence, it is evident that they made expression the primary and constant object of their studies. For the characters and expressions in his large picture of the Last Supper the former appears all his life time to have been searching through nature. Raphael seemed to have formed in his mind the whole of his intended work before putting a line upon paper, and all was regulated by expression. Domenichino thought no line worthy of the painter, that the mind did not draw before the hand. The portfolio of Rembrandt is like the page of Shakespeare—every drawing is in itself a drama—the passions speak for themselves—composition, colour, arrangement of light and shade, all are lost in the power of expression. It is this, and this alone, that entitles our works to situations in the galleries of monarchs, and by the side of the great efforts of genius of different ages."

Beauty, grace, and expression, may be found separately;

but the union of all is to be attempted, and the artist is fortunate who can create this union in his works. Nor must he be dissatisfied if he do not discover the superlative line of demarcation between beauty and ugliness, grace or affectation, or between expression and insipidity, for this line will always remain as indistinct as the edge of a light bordering on shadow; we see both mixed in the penumbra, but where either begins or ends no one can say.

PAINTING IN WATER-COLOURS.

WATER-COLOUR painting, as practised by the ancients, is most probably of much older date than the sister art of painting in oils; but their finest works were done only with colours tempered in size, white of eggs, and other gelatinous substances, consequently were opaque, such as are at present used for scene painting, and now called body colours. These have no transparency, nor indeed any of the richness we find in all natural objects. The freshness of the vegetable kingdom is quite unattainable; the glossy coats of animals cannot be imitated, and the eye of every living creature loses its brilliancy, when represented by such an imperfect medium.

On the invention, or rather perfecting, of oil colour painting, the use of size colours was immediately laid aside, except as a preparation for the more powerful and finishing colours in oils. With such an admirable improvement the world of art rested for ages entirely content, nor was it imagined that another mode was to be invented in England, which was in some measure to set aside the use of oil colours. That such has been the fact, is shewn by the number of excellent artists who have entirely devoted themselves, and with the greatest success, to painting in water-colours.

In its present improved state, water-colour painting has

some advantages over the sister art, such as greater purity and light in the skies and distances, or wherever light is wanted, and in those tints which give clearness and truth to the aerial perspective: its colours can also be worked with or without the glossy appearance which is inseparable from a varnished painting in oils. Yet it must be granted that the latter mode has also advantages, and those very great, if we could be assured that these advantages, *viz.* depth and transparency of colours in the shadows, would endure as long as the picture; but as far as our experience will carry us, it seems that the oils and other vehicles used, as well as the constant exposure of the surface to the action of the atmosphere, and often foul air, &c., occasion a certain, although slow, progression towards a loss of that superior transparency and colour, in the shadows in the first place, and lastly, a total obscuration and decay of the whole picture. It is true that some hundreds of years may be necessary for this result; yet when it is considered that the oldest paintings in oil, worthy of notice, are not of higher date than the times of John Van Eyck, or about four hundred and fifty years, and of these only a small number to be found, and that they will not bear any comparison as to condition with the miniatures and other ornaments still existing in missals not much less than one thousand years old, we cannot but fear, whilst regarding the striking difference between them, that there may be some lurking vice in oil paintings not yet entirely got rid of. The manner in which the missals have been kept or preserved has done much for them, but the same method is inapplicable to pictures done in oils with the same success; and could we have had specimens of both manners

brought to light by the discovery of Herculaneum and Pompeii, we fear, hermetically sealed as these towns were from the external air for so many ages, that the oil-coloured paintings, if at all visible, would not have borne any comparison with the lively-coloured frescoes that still remain after a lapse of nearly two thousand years; and our opinion is founded on the fact, that oil has been found in both these towns changed into an opaque and thick grease.

That every fixed oil must have undergone the same change, if subjected to the same ordeal, can hardly be doubted. If to this we add the gums, various varnishes, and long *et cetera* of other vehicles at present used in oil painting, and set against them the simple manner in which the water-colours of the ancients were mixed, *viz.* with a size, of which a very large proportion was water, and again, that water was the only solvent used in working them, which evaporating, left them in their purest condition, we cannot but be convinced that to the simplicity of their composition they owe entirely their endurance for so long a series of years; nor is it, in our opinion, presuming too much that the water-colour paintings of the present day, in which water only is used as a solvent, may, and most probably will, endure much longer than works done in oils according to the present modes, when the requisite care is given to them.

It may not be out of place to state here the best method of preserving water-colour paintings which are to be framed and hung up against walls, as in exhibitions, &c. The drawing should be in a perfectly dry state before it is laid on the glass. The glass to be made as clean as possible, and also well secured at the interior edges of the

frame, by pasting narrow strips of paper along the sides of the frame, part of the paper resting on the frame and part on the glass; this is to prevent any external air, smoke, &c., from approaching the front of the picture; when the picture is placed against the glass, a good board must be laid over the back of it, fitting the frame, and this also is to be covered with paper all round its edges, part of the paper being pasted on the board and part on the frame; thus the picture becomes entirely excluded from the attacks of dust, damp, foul air, and many other inconveniences; and it is only when framed in this manner, if exposed to the light, that it can with safety be preserved for any great length of time.

The very trifling quantity of gum arabic, size, &c., which the water-colours of the present day receive to make the more opaque colours transparent, and all of them adhesive, hitherto have not been found to create the smallest change in their qualities, whether shut up in portfolios or exposed to the light.

A great variety of methods have been used since the invention of the present transparent water-colours; to enumerate them would be of little benefit to the reader, the intention of this work being to point out the most approved system of painting now in use, and which has been found so successful, that little more (if any thing) is left to be wished for.

This system is the simplest that can be devised. It consists in merely mixing colours to the hue required, and laying them in their proper places; and as it is quite impossible to get the various delicate and prismatic tints of distances and skies at the first painting, we must rather

attempt them by preparatory colours (not shadows), and finish by repeated and mild additions, when these are wanted, or by taking out the colours where too dark, or of a hue so far wrong as to be unconquerable by any other method. The brilliant lights in every part of the picture, where they cannot be left untouched, are to be produced by taking up the colours and then finishing them to the requisite hue, proceeding throughout to use the warmer colours of the pictures before the colder tints, as shadows, &c., are used.

This is the broad outline of the practice in use by the best artists of the day, and is as widely different from that which was in use on the invention of our present water-colours, as the pictures of the two periods differ in quality of every kind, in colour, richness, depth, variety, effect &c.

Many of the artists of those days trusted to their execution with the black-lead pencil, or reed pen, for the finish; both very ineffective instruments, especially the former, for producing a natural appearance in painting.

The black-lead pencil is very feeble, and the reed pen much too coarse (except in very skilful hands); and both too frequently are used to represent an outline where no outline should be visible, as on the light sides of every kind of object, &c.

The modern style may date its true origin with the invention of the modern water-colours, *viz.* in 1781, about which time Thomas Girton was in his eighth year, being born in 1773; and it is to this celebrated and highly gifted artist that we are indebted chiefly for pioneering the way in their proper use, and by his excellent works throwing out of estimation the "water-washed drawings" of his

time; these, however, still continued in use for some years after the world had learned from the works of many of our best water-colour painters that the newly-invented colours were capable of rivalling the hitherto unrivalled art of painting in oil.

Since their first invention they have been considerably improved; their different degrees of permanency, &c., are better known, and chemistry, now almost an entirely new science, has lavished her treasures in aiding the colour-maker's art, so that we have not much left to wish for, unless some means could be devised to render fixed a few of the beautiful, but fleeting colours, as some of our yellows, and the different tints obtained from the cochineal insect.

In using water-colours, three different modes are brought into action on the same drawing. The dry cakes are rubbed on palettes, or common white plates, for skies and distances, and used in degrees of force and intensity, such as the tone of the drawing may require; for middle distances, the colours may be either rubbed on the palette, &c., with water, or taken from those prepared for the foreground. These are either the hard cakes placed in metal colour boxes (japanned or lacquered), rendered soft by laying water on them, or the lately prepared soft colours, which remaining constantly moist, are at all times ready for use. With either of these the foregrounds are painted in with strong colours, of a rich and deep tone, preferring always the warm colours to the cold, for one conclusive reason, among many, that the warm colours are readily convertible into a cold or cool state; but the converse is very generally not a little difficult, and sometimes impossible without the entire removal of the objectionable

tints; and it is constantly found in practice that, however warmly coloured a drawing may be in the commencement, it will lose very much of this warmth before it is finished by the introduction of the shade tints, which are never, or seldom, used in the first colours of the picture, or, as it is usually termed, "the laying in."

It is certainly much the safest method of proceeding, to lay in the warm colours first, as well as all the local colours (by local colours we mean the natural tints which objects have when seen without shadow), and the colder colours over them, not forgetting, whilst laying the local colours, to attend carefully to their perspective decrease of brilliancy, caused by the increased intervening body of atmosphere, or lengthened column of air, as they retire from the foreground; or in other words, the perspective gradation from colour to grey, as the tints become more distant. And as shadows take very much the appearance of thin gauze veils thrown over the places that they obscure, they seem to be easily imitated by following a similar process in painting, which, permitting more or less of the local colours to be seen, according to the greater or less intensity of those veils or shadows, produces a richly-varied set of tints the very opposite to monotony, possessing all those estimable qualities of the Italian and Flemish painters, called by some "internal light," by others "transparency."

The student will find it best not to attempt the mixture of more than three colours, as pointed out in the index of tints, but rather to choose the one nearest to the tint he seeks in appearance, and lay other colours over it in order to bring it to the desired hue. When many colours are mingled together, they lose brilliancy in proportion to the

numbers mixed; consequently, any two colours, or mixed tints, will be found to possess brighter hues when laid over each other, than could be obtained by mixing either the two colours, or all the colours that enter into the composition of the two mixed tints, together. And it may be here well to mention, that when one colour or tint has to be laid over another, the first must be allowed to become perfectly dry before the second is laid upon it, or an appearance and blemish will be produced not easily remedied.

In use, all colours, tints, or shades, whether light or dark, should be made moderately liquid on the palette or plate before they are taken into the brush for application; for the surface of paper, when seen through a powerful lens, being not much unlike a straw-yard or stubble-field that has been well trampled, it becomes absolutely necessary that the colours should be laid on the paper in as fluid a state as the requisite depth of tint and preservation of forms will permit, in order that the interstices may be well filled, and produce that solidity of colour, which we see pervading every object in nature.

We must here be allowed to offer a caution, only necessary to be remembered by very young beginners, *viz.*, not to make up a larger quantity of any tint than may be wanted, or be adequate to cover amply the spaces intended; for when the remainder has to be adapted to some other part of the drawing by the addition of other colours, if the tint should have been made too abundantly on the plate, there must be a corresponding abundance of the additional colours to effect a change, which not only consumes much time and colour, but is also exceedingly fatiguing. Such a process increases the labour of painting more than a

hundred-fold; or rather, if continued, creates insuperable difficulties. A few even not so young in practice as those contemplated, perhaps, may derive some advantage from these remarks, as it is certain that nothing adds more to the difficulty of colouring than an improper adaption of the quantities to the places for which they are intended.

The neglect of the foregoing cautions produces two remarkable effects, by which the works of the unpractised are readily known. When the colours have not been properly liquefied, the drawing takes a dry and dusty appearance. The contrary fault occasions an insipidity and thinness of colour, surrounded by dark edges, insurmountable until the sponge has cleared them wholly away.

The following table will shew the different sizes of drawing papers, *viz.*—

	Inches.			Inches.	
Demy	20	by 15	Atlas	34	by 26
Medium	22	17	Double Elephant	40	26
Royal	24	19	Antiquarian	52	31
Super Royal	27	19	Extra Antiquarian	56	40
Imperial	30	21	Emperor	68	48
Colombier	34	23	Extra thick Drawing Papers.		

The last-named on the list are chiefly used by artists in teaching. On this paper a coloured drawing may be executed without fastening it down to a drawing board; nor is it liable to break or crease when rolled sufficiently small for the pocket, the roll being easily made to return to a flat surface. The greatest objection to this paper is the trouble it creates in mounting on other papers, and this is necessary before any drawing can be completely finished.

The best finished drawings are always laid down (mounted) on three or four thicknesses of drawing-paper, so that it may remain solidly level whilst undergoing the various workings, sometimes rather severe, to which drawings of the modern school are subjected; the chief principle of the present method being to incorporate the colours with the paper as much as possible, and not to leave them on the surface, carrying this operation from the most delicate tints into the strongest or deepest toned.

Drawing paper is often so absorbent, that delicacy of tints, and all the finer touches necessary in finishing, are entirely lost. Such papers should be carefully avoided, not only on account of the endless labour required to produce any result, but when all that is possible has been done, a loss of reputation is involved merely by the bad qualities of the paper. For all purposes paper with a firm and smooth surface should be selected. Drawing papers are sometimes of an extraordinary degree of whiteness; these may be suspected of having had a superabundance of acid used in the bleaching, and the draughtsman had better sacrifice a small matter in the extreme purity of colour, than run the risk of having the whole work ruined by any remains of the acid. Paste used for mounting drawings often has alum in it, or has become acid with age; both these are to be carefully shunned as dangerous. If the amateur or artist procures his paper, &c., direct from some of the most respectable London houses, where materials are sold for the use of artists, he will very seldom, or perhaps never have occasion to find fault, for in these houses it is so well known what the artist requires, and so much to their interest to study these wants, that a *written*

order to one of them will always produce a result fully equal to the wishes of the purchaser. The author of the present work has at all times been so perfectly satisfied with the colours, drawing papers, and other materials of the Messrs. ACKERMANN and Co. (his publishers), that he feels much confidence and pleasure in recommending them.

A pupil, anxious to advance in water-colour painting, would best forward his views by taking a few lessons in drawing from some eminent teacher, for the manipulations are sometimes difficult, and at all times require much dexterity of hand, arising out of the necessity for expedition, or the colours would dry on the paper before his intention had been attained, and this produces blemishes of various kinds, such as inequality of colour, unevenness of tint, hard edges, &c., all of them requiring a strong application of the softening brush, and quite as often have to be taken out entirely by the sponge. To have seen a sky once laid in by an experienced artist, would save the student many months of vexatious trials, especially where the tints are varied from the horizon to the zenith; as, for instance, in a sunset, for the blue of the upper part of the sky cannot join the yellow or orange tints of the horizon without an intervening and connecting tint; in this case the gradation of colours might be from blue into violet, this again into a rose tint; then leaving all blue out, we advance into the yellows and orange tints, and possibly end again with the various rose tints and warm purples. This is one kind of evening sky; another perhaps would proceed from blue, through violet, into white, and from the white advance through the different stages of the lower parts of the sky or

clouds. More instances need not be added. Such skies may be commenced either from the top or lower part, *viz.*, either with the blue tints or the yellows; if with the latter, begin with clean water in the brush at the top of the picture, using a swan's quill camel's-hair or brown sable. If the picture be large, carry the water evenly over the paper from edge to edge of the drawing, and a little before the water approaches that part where the blue is to gradate into violet or rose colour, add a little weak colour of the last-mentioned tint, carrying it forwards, and strengthening it in its progression with yellows, and gradually leaving out the lake or Venetian red (whichever may have been used), until we arrive at pure yellow; then add, should the horizon have a rose or warm purply tint, a little madder-lake first, and afterwards a very small addition of blue.

For the upper, or blue part of the sky, the board has to be turned, so that the top of the sky may lie nearest to the artist or student. We should have stated, that on all occasions the drawing-board is to be laid on an inclined plane, in order to allow the fluid colours to run gently downwards, and not in every direction, as might be the case were it laid on a level table; the additional comfort of working and of seeing the work, need not be described, as the first-mentioned cause for this position of the drawing is imperative. When the upper part of the sky is placed in the position named above, the student commences with clean water on the yellow part of the sky, *viz.* on the horizon, and bringing it downwards towards the blue in an even and straight line as quickly as possible, so as not to disturb the yellow. On approaching the rose tint,

another kind of rose tint, perhaps a little bluer than the first, is to be added to the water, and converted gradually into violet, and lastly blue, as it arrives at the bottom of the paper. These tints are to be repeated both on the upper and lower parts of the sky, until the whole is something deeper than it is to remain; it is then washed all over, and softened with the flat tin brush.

By this double process of working the sky, the gradations are kept of a pure and delicate hue, for it is not possible that tints in the lower part of the sky can be sullied by the blues, or the blue and violet tints of the sky be spoiled by the yellow and orange tints running into them, which would very often happen when the whole sky is attempted at once, *viz.* to continue the gradations directly from the blue into the horizon.

Lastly. After the softening, more tints are to be added in the same manner as on the commencement, until it becomes of the proper hue throughout, after which the clouds are to be laid in. The student should never forget that the sky is a most important part of the picture, for without a truly good sky no picture can be pronounced complete. It is this which gives the colour of the air tints, and influences the whole, and until it has been obtained, there can be little use in proceeding with the rest of the piece. That it is difficult to paint a sky in water colours, we grant; for were it otherwise, we should see more frequently a better class of skies than are too often produced: yet they are worth all the labour and study that can be given to them, and can only be obtained by accurate sketches from nature.

It has very often happened to the Author, that he has

been without his sketch-book and colours when there has been most occasion for them; at such times he has, with his pocket-pencil and the back of a letter, made useful notes, using terms for colours or tints sufficiently familiar to himself to enable him afterwards to make a coloured sketch much nearer the truth than if he had trusted entirely to memory. The following, copied from some of his written notes, will show the student how much may be done with very limited means.

"Top of the sky very light *tea-greenish* blue—gradating into white—yellow—orange and rose-tinted clouds in horizontal stripes; lower, crimson breaks; also horizontal, very near the lowest edge of the sky. Clouds of a laky purple joining the distant land in blue purply colour; distance of same colour—distant trees the same. A line of nearer trees and bushes of all the different hues of dark olive greens; the distant parts of a large field, on which these trees stand, of the same olive greens—middle of the field cool drab and russet greens; near at hand, warm drab green—road in front, deep drab; this is the lightest part of the picture except the sky." The above is of course a sunset, with a low-placed sun.

Another, where the sun was visible, accompanied by a very slight sketch in lead on one quarter of a sheet of writing paper, part of a letter: "Top of sky purple grey —gradating into a very light tea-green; nearer the sun, pale orange tint, very light; sun, brilliant flame colour; stripes of irregular clouds near the sun; above and below it of a pale orangy crimson; darker and more purple near the sun, darkest where the sun was partly covered by them on both sides. Clouds along the horizon greenish grey

—distant land, leaden grey; edges of clouds near the sun, gold; clouds above the sun, bright copper and gold."

The following is merely a memorandum of a subject, and general effect: "A grey and windy day; boys cutting rushes in a small pool of water; figures and rushes near them the only objects in light; large trees behind the pool: the whole not cold in colour."

The following is from a note made at Seacombe, opposite Liverpool, during a thunder storm: "Sky at top, drab-coloured clouds, with grey chalky lights, changing to very dark blackish purple clouds, in large masses—lights, French grey; the purple masses carried into the sea leaving no visible separation; the sea in front of a drab colour gradually growing lighter as it approaches with a few figures and small boats on the shore, in a very subdued tone, but not cold in colour; very few buildings in Liverpool seen through the gloom, and these of a blueish white, scarcely visible; the distant lightning in very small lemon-coloured shafts, accompanied by broad patches of a pale Indian red colour, in openings of the clouds."

These extracts are quite sufficient to shew the student that a great deal may be done by a very few notes made at the moment, either with the pen or pencil, and if he will accustom himself to such notes, a little more copiously made out, he will find that he advances at a much greater rate than by merely trusting to his sketching from nature alone, either in colours or with the pencil; for how often does it happen that the amateur or artist sets off amply provided with books and colours, and returns without having seen any important effect; and again, when the most striking effects of colours, &c., occur, he as frequently finds

himself unprepared. It is by missing no opportunity that the diligent advance rapidly, whilst he who waits for the lucky coincidences of being prepared for the striking appearances of nature at the moment they are offered to him, generally loses some of the most beautiful and impressive combinations of colour and effect, such as seldom or ever are seen twice in a life-time.

On looking back, the reader will find, that in the mode of working a gradation sky it is stated, that the second rose tint may be "a little bluer than the first;" it has now to be mentioned, that not merely a rose tint, but every kind of tint in skies, as well as other parts of the picture, will be made much clearer, and more even, by varying the mixture in some small measure from the one preceding it. For example, if we wish to make a brilliant blue in the sky, and for this purpose mix up a tint exactly to our wishes, say in a quantity, and then work this colour in continual repetitions of tint over tint, we shall not obtain any of the brilliancy, evenness, and purity, that another mode of proceeding will give. Suppose we make the first tint of lake and indigo, the second of the same colours, but in different proportions, as a little more lake, and the third again different by adding still more lake, or a little more blue, the whole, when done, will be more even and more bright than if done by one mixture. Again, do not mix too many colours at once, for different colours laid over each other produce a much purer and brighter tint than when mixed with too many other colours.

Similar results will be found in other parts of the drawings; for example, if Raw Sienna be deepened by several applications of Raw Sienna, in place of being made the

proper depth at once, it will not be so bright as it would if another yellow, as nearly like it as possible, had been used for the purpose. The same effect in every other colour is a common occurrence, and this holds good in regard to mixed colours. Or if a deep and rich-toned blue be required for a sky or distance, Indigo laid on first, and Cobalt afterwards, or the Cobalt first, and the Indigo upon it, will produce more power than can be got by mixing the two colours together before using them. These differences may, in a great measure, be occasioned by the difference in their specific gravity, as the heavier colours take their places on the paper much sooner than the lighter; this is immediately seen by mixing vermilion with any less ponderous colour, as Indigo, Antwerp-blue, &c.; the vermilion has to be constantly stirred from the bottom of the mixture before the tint can be laid on the paper, and then great expertness is necessary, in order to keep the two colours flowing together; Cobalt is another colour of similar qualities, but not so troublesome. Thus it is well to mix colours as nearly similar in specific weight and mode of working as can be had, where great evenness of tints is desirable.

It has before been recommended to the student not to mix too many colours together, nor should he in the beginning have too many in use at once, for the combinations of six or seven colours will certainly be made out with less trouble than twice or four times that number; besides, there is a greater chance of harmony in using a small number of colours, and we never see with a limited palette those extraordinary and crude drawings produced, with which a tyro too often surprises his teacher, and every other person, when he has had the whole range of a

first class colour box. We do not say that a large number of colours is unnecessary, rather the contrary, but it certainly requires much more skill to be enabled to select proper sets out of them for particular intentions, than can be expected from a beginner, especially in this department of painting, where their opposite qualities are not so well held together as in oil colours, or the still more adhesive vehicles with which they are very generally worked.

There is in oil painting so much greater power of doing some things than in water-colours, that if asked to give an opinion as to the greater or less difficulties of the two styles, we should say, that up to a certain point, painting in oil is much the easier operation. The colours lie in the places where they are left by the brush; they occasion no hard hedges by being forgotten for a moment; all kinds of colours can be compelled to hold together, and work agreeably from the brush; a complete set or sets of tints can be made up, can be prepared ready for the palette in the most deliberate manner, and used as deliberately, without the least fear of the changes that such sets of tints mixed in water-colours would be undergoing every moment, particularly in the summer, or in a very warm room, by evaporation.

The facility with which such things are managed in oils renders it the easier of the two; but when the student has acquired that promptness so essential in the commencement of a water-colour drawing, he will find the finishing processes comparatively a work of leisure. If an idea occurs to him, it can be instantly executed, every thing being at all times ready; the work becomes immediately dry, and safe from injury; his colours require no preparation,

nor is there risk of soiling the neatest dress; they can be as suddenly laid down, if unexpectedly called from the drawing, and if forgotten, no harm happens to the colours so left; with many other conveniences, which combined, have given this method of working colours a degree of popularity which must long continue. Indeed, oil colours are not of equal value for sketches, or slight works to be kept in portfolios; the change they undergo is so great, as to render them almost useless in a few years, whilst water-colour sketches, however slight, are always the same, and whatever value they might have when first done, is continued to an indefinite period.

As we have already said, in commencing a drawing, the first colours are usually rubbed on common white plates, or palettes, and we lay in the whole of the sky and distances something deeper than the intended effect; to these tints on the plates we add colours from the tin boxes, in which they are softened by water being placed on them, in small quantities, for the middle distances; we have then done with the trouble and loss of time occasioned by rubbing colours, and confine ourselves to the metal boxes entirely for the foregrounds, and paint in the chief objects with the half-melted colours, using them just sufficiently fluid to sink well into the paper, and to give with some degree of precision the forms and characters of objects, rather in masses than in detail; these are left for the finishing processes. Nor must we omit again to mention the necessity of using the richest specimens of every foreground tint, omitting wholly (unless in particular cases) the colder colours.

The drawing is now *laid in*, and we commence another

series of operations, as soon as the paper is dry. This consists in taking a large flat camel's-hair brush, made in tin of different breadths, and with clean water only, we commence with the sky, washing the drawing in every direction, to blend and unite the tints of the sky and clouds together, so as to give a generalizing tint to the whole, such as we see in nature, where the sky and clouds, from the zenith to the horizon, invariably partake of the universal air tint that every day and every hour, as well as the greater impressions of seasons, &c., produce. This operation requires great care, and can only be successfully performed after many trials, attending always to a very material point, without which the sky, &c., will have blemishes, that nothing less than taking out the work entirely by the sponge can remedy, *viz.* to first damp the drawing equally all over, and to keep it in this state till the general fusing and blending operations are completed; without this the colours come off in patches, most in those places which have been longest wet.

Whilst the softening process is going on, the board to which the drawing is pasted is to be laid in an inclined position, so that the soiled water may be carried down to the lower edge of the drawing, and so run off. The student would find it exceedingly convenient not to have laid in the large trees usual on foregrounds, or any masses of green standing against the sky, for the extension of these colours into sky and distances by the softening process, occasions such an impurity of tints, that an adept only can bring them again to their pristine purity, by plentiful ablutions of clean water poured over the drawing until the tints of the sky, &c., are restored to their original clearness.

In washing and softening the colours of the foreground, it is not at all desirable that much colour should be taken off, for as we must suppose them to be laid in with colours and tints true to the intended effect, much less softening or blending is required in them than in the more distant parts, and the finish is better obtained by other means, than by the generalizing application of the flat brush.

It not unfrequently happens that changes have to be made in colours after they are laid in, especially where the student does not work from a previously coloured sketch (a coloured sketch saves much care and time when a large drawing has to be made); these changes, sometimes of masses, sometimes of colours, lights, or shadows, or for the sake of introducing a piece of water on the foreground, as a standing pool, or rivulet, &c., when requisite, are best made either by a piece of linen, wash-leather, or cotton cloth, dipped in water, and wrapped round the forefinger, or the sponge, according to the size of the work to be taken out. Where gravel, or sandy sea, or river shores, have to be wrought into finish, the wet cloth on the finger will most readily give the wished-for effect, by gently rubbing off the surface of the colours; no other process can produce the same result, for the grain of the paper permits the colours only to come off which are on the summits of these granulations, leaving in all the small and intervening valleys (if we may be allowed this mode of expression) a modicum of deeper colours than those left on the highest surface and very often small lights are found in appropriate places, which only require a shaded side and a cast shadow to represent stones and gravel; nor is it amiss to avail ourselves of these accidents in the minor concerns of the

picture, whenever they so occur, that the character of the part where they happen may be strengthened by them, and the general effect of the whole not disturbed. If, for example, in the haste or carelessness too often attendant on a first laying in of the picture, accidental lights be formed on the light side of a tree, and semi-lights on the shade side of the same object, both indicating clusters of leaves, &c., suitable to the character of the tree, it will be infinitely better to follow out these tints in the finishing, than to *muddle* the whole tree head by converting these indications into shadows, and placing new lights in places where shadows are rather indicated. It is not here intended to recommend the student to trust to accidents in the construction of his picture, for whoever does so, will be as greatly disappointed as those who, in the common affairs of life, trust to chance rather than their own forecast.

In finishing the picture, a great deal has to be done by taking out the lights and half-lights, and by placing new colours and tints in those places which require enriching. There are various ways of taking off the lights or colours that are to be changed. Where the colour is not to be entirely removed, a little water laid on the part with a brush, and immediately pressed with a piece of cotton or linen cloth, and afterwards rubbed with a dry part of the same cloth, or wash-leather will bring off quite as much as may be wanted; but when the colour has to be wholly changed, it will be necessary to take it off so completely, as to leave the paper perfectly white, as in the brilliant light of trees, vegetation of all kinds, water, edges of clouds, &c. These are managed by laying water on the places, with the wished-for forms accurately defined—a piece of

clean blotting paper, after allowing the water to rest for a few moments, is to be gently pressed on the wet places, after which, clean Indian rubber, or bread crumbs, rubbed over the same places, will effectually clear the parts from every particle of colour. It is in this manner only that light objects seen against a dark ground can be effectively treated, and many trials must be made before the surface can be left in good order for receiving fresh colours, where neatness of finish is required, as figures, shipping, &c.

It must be obvious to all, that the greatest care has to be used in seeing that every part of the picture may be quite dry, except those places where the colours are to be taken off, or serious mischief may be done by a single touch of the Indian rubber, or cloth. When the half-lights are taken up, they are not to be left in the state the cloth may leave them in, but must receive other colours, suitable to the required hue of the object, and surrounding objects, and also with the same reference to the whole picture. This also has to be done in those lights where the white paper has been exposed, in both avoiding, as much as possible, exceeding the edges of the lights; for we suppose that the foundation tints have been previously brought to a right tone of colour, therefore the addition of other colours, however light, must do harm.

After the lights are reduced to their proper hues, the shadows claim the attention of the student, and some of these may now appear changed in tint, by the contrast of the new colours of the lights placed near them; for colours, or tints, *per se*, are not so positive as to preserve the same appearance under all circumstances, being dependant for every delicacy of tint on the colours which are

near them; thus greens are more vivid in contact with reds, and reds are more vivid also in contact with greens, their natural contrasts.

If the painting has been wrought from an approved coloured sketch, the shadows to be brought into tone cannot want more than a few glazings of cool or warm tints. The colours required for the best finishing tints of shadows ought to consist of the different degrees of cool colours, as in all cases, more especially in shade tints, the best and most natural effects are produced by laying cool glazings over a warm ground colour, as we have before observed; and when the picture is in this proper state, the most powerful shade tints for vegetation on the foreground are those from Indigo alone, very sparingly used, or with the addition of Lake and Vandyke Brown, or Burnt Sienna, for almost every other kind of object, of course varied in their proportions. Lamp-black and Indian Yellow, with some small quantity of a warmer colour, as Burnt Sienna for lights, and without, for the shadows, make greens that admirably represent the colours produced by an English cloudy sky; but it is not possible to say (nor shall we attempt this impossibility) "take this and that colour for the sky, such and such for clouds, mixtures of 2, 3, and 4, for distances," &c. &c., as it cannot but be self-evident that the absolutely infinite varieties of tints, under all the possible combinations of light and shade, depending also on climate, season, and innumerable other circumstances, must require each their own separate hues and tints for all the different parts of the picture; the best advice we can offer is to mix the colours as before described, and at the same time copy a good drawing.

Tints for portraits in water-colours are more readily obtained as no white enters into their composition. A perfectly smooth drawing paper is to be selected, yet however smooth the paper may be, the portrait, when finished, will constantly appear best, and be seen to most advantage, if hung with that side or edge of the picture towards the light which, whilst painting, was the side from which the light came. This whenever not attended to, is the cause of much disappointment both to the artist and spectators, for the smoothest papers have certain inequalities of surface, which hold a shade tint in the direction from the light; and when all these are reversed, the allowances which the artist in finishing would naturally make for them, whether conscious or otherwise of their existence, would also be reversed, and thus a double operation against the good appearance of the work takes place. This renders miniatures on ivory preferable; the surface is always perfect with common care. But whether on ivory or paper, let the student paint in his first colourings, and finish in the way we have already so frequently recommended, and which we cannot avoid repeating once more, *viz.* with clear, bright, and warm colours, and to be exceedingly careful not to disturb the under colours; to place the greys for shadows in the face and neck, made with Ultramarine and Venetian red; to leave until the last the darkest touches, for which it is usual to employ Carmine and black, or Burnt Carmine; where yellows are wanted in the flesh colours, the best pale Yellow Ochre will be the most suitable; and not to use gum-water, except in the darkest places, as the deepest shades of black or blue dress, the hair or the darkest part of the eye, nostril, lips, &c., and always in the most sparing manner.

In conclusion, we have only to remark that the student should be careful always to have his brushes well washed out in clean water, for it is inconceivable how much trouble is necessary to cleanse a brush from some of the darker colours, when it has been put away with much colour in it; in short a brush that has been allowed to dry filled with Indian ink, can scarcely ever be again made fit for delicate colours; and we may here add that brushes are much hurt by being long kept in water.

The best brushes are those called soft brown sables, and which will hold when full of colour, a good point. There is another sable, the red, which is also useful in water-colours when good, chiefly used for detail. The sizes should be well varied, and suited to the extent of surface, and at all times not used with too much colour, *viz.* to be used full, but not so much so as to run out, or be otherwise unmanageable. Sometimes colours refuse to work on certain places, and always on paper which has not been wet, or sponged; a little prepared ox-gall (sold at the colour makers) will remedy this evil; but the less is used the better, for the colours are not easily removed where it has been freely used in them, nor will other colours without gall work well over them.

In compiling the mixed tints some colours used by artists have been left out; as Ultramarine, which approaches so nearly to Cobalt, that its mixture with others produces very nearly similar results. The same may be said of Carmine, &c. It will be noticed by the reader that many of the specimens in the index are not so equally laid as others; these are not faults in the operation, but have been pur-

posely produced in order to shew as much diversity as possible in each of the tints, and also the difference that may be made by more or less of the same tint being left on the paper.

PRECEPTS.

As Painting embraces so large a field of operations, and always under varying aspects, it can hardly be expected that the following precepts are to be considered absolute. Many of them depend so much on localities, circumstances of weather, and other things, that they can only be taken in a general sense: yet, in this manner, the pupil will find himself provided with a good foundation on which he may construct with safety; and common observation will supply him with the exceptions to these rules.

LIGHT AND SHADE.

1. Objects in a strong light, whether natural or artificial, have their shadows dark and accurately marked.

2. Shadows from artificial light increase in size, as they recede from the object causing the shadows.

3. Shadows from the light of the sun or moon are of equal breadth throughout; that is to say, a perpendicular post will cast its shadow in lines parallel to each other. This is to be understood with proper allowance for the mode in which lights and shades are distributed. Lights always inflect or bend into shadows in passing the object which casts the shade: in the same manner, shadows bend towards the light, making a softening penumbra be-

tween them, which must not be overlooked in a finished work.

4. Lights and shadows in cloudy weather are very indistinct; frequently there are neither.

5. In fogs, the objects become of one colour, having neither light, shadow, or cast shadows on the ground.

6. Cast shadows are always darker at their origin than the shade side of the object which casts or throws the shadow; frequently altogether darker than the shade side of the object which projects the shadow.

7. All ronnd objects, as columns, globes, &c., have a strong reflected light on the outer edge of the shaded side, the darkest part of the shadow being removed to near the middle of the column, &c.

8. Lights thrown on objects from fire are of a reddish hue, and not so bright as those received from daylight.

9. In the shadows of the human figure or animals, do not mark the features, limbs, or muscles, with hard strong shadows: let them blend imperceptibly into the lights, as well as other shadows which may surround them. It is in this that Correggio excels.

10. If a figure or object is to be strongly detached from the back-ground, let the dark parts of the figure be placed against the lighter parts of the ground, and the lighter portions of the object against the dark masses of shadow of the back-ground.

11. If grandeur or breadth be desired, let the lights of the principal objects mingle with the lights of the sky or back-ground, and the shadows mass with the shadows. Sir J. Reynolds has shown in his practice, that this mode, in addition to grandeur, gives a graceful softness.

COLOUR AND EFFECT.

12. All objects will partake more or less of the colour of the medium through which they are seen, according to its density; as fog, smoke, vapour, &c: and also are strongly tinged with the hue that the light receives in passing through clouds, varying with the colours to be found in different parts of the sky.

13. Light will appear brighter by being opposed to dark shadows, and at the same time the shadows will appear darker. And similar results are produced by colours, which will vary their appearance according to the surrounding contrasts, as a flesh colour will appear fairer on a red or green ground than upon a white ground, or one of its own colour. Red and green are middle tints, and thus operate as shadow when surrounding lights, as well as being agreeable contrasts: the first, a harmonizing contrast, and often used by Titian; the latter, a distinct and separating contrast to the rose tints.

14. Bright surfaces do not shew their colours so well as objects less smooth; as in the colours of grass, leaves of trees, silks, &c. In these we find the colours of the sky strongly reflected, especially on objects near at hand. Thus the colour of objects in a bright or dull day are widely different, and by their hue mark the state of the atmosphere.

15. When there is most light, colours will be most distinctly pronounced. In their shadows each colour will partake of two hues; the shade proper to the colour, and shade proper to the atmosphere; and in the deepest shades colours merge nearly into one tint.

16. Colours seen in a reflected light will generally be colder than in an open light. The exceptions to this rule are rare, and proceed from artificial lights.

17. Colours will always have their purity destroyed if the light be of a different colour; and reflected lights will always partake of the colour of the objects nearest to them, or lying within the proper angle for their reflection. Thus, both the lights and shadows of a white dress become red, by the reflection of a red dress near it.

18. Shadows may be impure by reflection, whilst the lights have their own proper colour, or conversely. These require nice distinctions, and should be marked with careful discrimination.

19. Shadows should seldom destroy the colours of objects. When colours have to be destroyed to give value to particular points, it is best done in distances, by the representation of mist, shadows of clouds, &c.; and on foregrounds, by generalizing with the surrounding objects, or the introduction of objects which possess little or no colour.

20. White is most easily seen in distances, the darkest colours being first to lose effect.

21. Colours are most distinctly seen when near or surrounded by their proper contrast, as purple against yellow; whilst the opposite would ensue, by placing near each other colours that harmonize, as blue and green, or yellow and green, &c. But it is to be observed, that when two different colours come into contact, both are changed in appearance at the junction: if a contrast, both become more vivid, and are each proportionably less vivid as they

depart from the junction. If in painting this appearance be subdued, a great and natural beauty is lost.

22. When a set of equal or flat shades are laid close to each other in gradation, increasing in darkness, the effect produced is, that every tint is a gradation in itself, and not a flat tint; but if with two pieces of paper the tints on the right and left of any one of them be carefully covered, the one left exposed will show the truth of the experiment, as we have noticed under the head *Chiaro-scuro.*

23. All objects lying under the effect of a clear sky will share a portion of the azure in their colours.

24. Distant mountains or high lands will often have their summits well defined by colours, lights and shadows, when their bases are not visible. This is occasioned by thin mist, or vapours, which are constantly playing over the surface of the earth, especially in summer, or autumnal mornings and evenings; therefore the distant summits must be more marked out than the bases, notwithstanding the latter are considerably nearer, as we have before stated.

25. Splendid colours, without a due subordination to each other and a certain quantity of shade-tints, will not make a splendid picture; for colours, in painting, have value only by proper association and treatment.

26. It is by the aërial perspective, united to lineal, that the distance from one object to another is estimated. Lineal perspective is not sufficient: therefore let the colours of objects diminish in a ratio corresponding with the increasing distance of objects, and increase of air tint.

27. Dark objects become lighter by distance, and light objects darker, but not in like manner; for lights are

slowly lost, whilst the darker objects lose colour at a great rate. The distance at which they both become of one hue is dependant on the state of the atmosphere and nature of the ground.

28. A fog, by destroying the colours of objects, gives to them an effect of great distance, whilst their size is preserved: thus deceiving the eye, and producing an unnatural appearance of magnitude.

29. Objects in front are to be most finished. As they recede the smaller points vanish, until we see them only in masses of light, shade, and general colour.

30. Objects seen between the spectator and a strong light will appear diminished. The contrary effect will follow when the object is lighter than the ground on which it is relieved.

31. Objects seen through rain lose much of their correctness of outline.

The following useful hint is from Leonardi da Vinci:

32. "It will be proper for an artist to quit his work often and take some relaxation, that his judgment may be clearer at his return; for too great application is sometimes the cause of many gross errors."

The following list is taken from Mr. Field's enumeration of the different substances at present in use as colours, separated into two classes, differing in permanency.

Permanent Colours for Oil and Water-Colour Painting.

WHITES.	WHITES *continued.*
Zinc White,	
True Pearl White,	Tin White,
Constant or Barytic White,	The pure Earths, as Chalks.

YELLOWS.

Yellow Ochre,
Oxford do.
Roman do.
Stone do.
Sienna Earth,
Brown do.
Platina Yellow,
Lemon do.

REDS.

Vermilion,
Rubrates or Madder Lakes,
Madder Carmines,
Red Ochre,
Light Red,
Venetian Red,
Indian Red.

BLUES.

Ultramarine,
Blue Ochre.

ORANGE.

Orange Vermilion,
Orange Ochre,
Jaune de Mars,
Burnt Sienna Earth,
Burnt Roman Ochre,
Damonico.

PURPLES.

Gold Purple,
Madder Purple,
Purple Ochre.

GREENS.

Chrome Green,
Terra Vert,
Cobalt Green.

RUSSET.

Russet Rubrates or Madder Brown,
Intense Brown,
Orange do.

BROWN AND SEMI-NEUTRAL.

Vandyke Brown,
Rubens' Brown,
Bistre,
Raw Umber,
Burnt Umber,
Marrone Earth,
Cassel do.
Cologne Earth,
Antwerp Brown,
Chestnut Brown,
Asphaltum,
Mummy,
Phosphate of Iron,
Ultramarine Ashes,
Sepia,
Manganese Brown.

BLACKS.

Ivory Black,
Lamp Black,
Franckfort do.
Mineral Black,
Black Chalk,
Indian Ink,
Graphite or Black Lead.

Colours subject to change.

BLUES.

Cobalt is very little changed by light, oxygen, and pure air, but more or less by contraries.
Royal Blue,
Prussian Blue,
Antwerp Blue,
Indigo, when mixed with lead.

REDS.

Iodine Scarlet,
Dragon's Blood.

YELLOWS.

Turbith Mineral,
Patent Yellow.

The Author has not found it possible to insert every colour which may be reckoned amongst those that change, and fears that many colours which are now in use, not enumerated in the list of permanent colours, must be considered, more or less, as liable to fade; such as Yellow lake, Dutch pink, Italian pink, Brown pink, and many others of a similar make.

ON PAINTING IN OIL.

WERE we acquainted with the ancient method of using oil colours, we perhaps might find that the modern practice is not very widely different from that which has been in use since the revival of painting in the fourth century, and that a detailed account of either, most probably would nearly serve for both.

Many ancients and moderns have made great mistakes, but with these we have nothing to do; for the inexpertness of practitioners can no more give character to an art, than the mal-practices of individuals can rob our nature of the higher virtues of which it is capable. Many also imagine that particular effects in painting were produced by some means kept by the artist to himself, and often carried by him to the grave; these ideas are fortunately falling out of fashion, and we no longer are running mad after Titian's grounds, or the vehicles used by others, in order to ensure transparency or richness of colouring.

We have at the present time a much greater assortment and choice of colours, with a better knowledge of what are permanent or fugacious; this knowledge has been added by the improvements in modern chemistry, and the number of colours have increased so much, that the only difficulty now remaining is in choosing a number sufficiently small, in order not to embarrass the palette. Nor

have the artists of England been idle; for if we regard the productions of either our landscape, historical, or portrait painters, and compare them with the works of their predecessors no farther back than a century, we shall find such a regular and rapid improvement, that we are fully borne out in the expectation that future ages will look up to the English school for excellences peculiar to itself, and the warmest friends of this fascinating art have now only to wish for places in which our best works could be displayed and preserved.

The invention of Painting in Oils is ascribed to John Van Eyk, in 1410; but it is evidently of much older date, as we find in a work by Theophilus (a monk, living not later, but perhaps before, the year 1000), entitled "De Arte Pingendi," directions that pannels, &c., should be prepared for pictures by being first painted with colours ground in linseed oil, and also that *all colours may be ground in oil.* In another work, entitled "De Artibus Romanorum," by Heraclius, who lived about the same time, we also find similar directions. The originals of both these works were published in a small quarto volume, with observations, by R. E. Raspe, 1781, and are of great antiquarian value.

Before the modes of painting in distemper and fresco were laid aside, a mixed method, partaking of distemper and oils, was used by many artists of the Venetian and other schools; nor is the practice yet entirely abandoned, as some imitators of old paintings still employ the distemper in commencing their works, for the purpose of obtaining that hardness of surface which nothing but great age can give to works entirely wrought in oils. The sur-

face of pictures done in this mixed manner will not yield on being pressed with a point or the edge of a knife, one out of the numerous tests of antiquity!

Paolo Veronese, the Bassans, Rosa da Tivoli, &c., first painted their pictures in distemper, or colours mixed with white of eggs, size, or glue made of parchment; and afterwards, when the effect of the intended picture had been well made out with black and red, mixed to a shade tint and white, their pictures were finished by working over them with colours ground in oil, transparent, or opaque, as they might be required, and lastly a strong varnish over the whole; a method of painting possessing some advantages, and worthy of consideration before the practice can be condemned: for there is an inherent vice, the chief fault attendant on all paintings done wholly in oils, which is, the constant tendency they have to darken with age; nor can the greatest care entirely remove this defect, a defect so strongly marked in many old paintings, that it is with the greatest difficulty the subject can be made out. To prevent this tendency to darkness, much attention must be paid in the colour-grinder's department; the colours used must be only such as have well established their reputation for permanency—the oils are to be of the purest kind, avoiding linseed oils; the gums, &c., called vehicles, should be very sparingly used, for wherever colour is thrown out of use for the introduction of varnishes and vehicles, it is impossible such pictures can have the durability of solid paint which has been finely ground, nor is it surprising that such pictures very soon give way to the inevitable ravages of time. In this respect water colours have a decided advantage; they contain

little more of extraneous matter with regard to their bulk, or quantity, than will entirely evaporate whilst working, and thus never grow darker with age, as is shewn by the state in which we find the miniatures and other ornaments of very ancient missals and other manuscripts, some perhaps nearly one thousand years old, which appear to be as perfect as when first done; and as the same colours are used both for oils and water-colour painting, there can remain no other reason than the one given above for the difference in their endurance, as the only seeming objection which can be offered, *viz.* the different manners in which manuscripts and oil paintings have been preserved (the former shut up from the air and the latter exposed), will not hold good; for it has been found that oil paintings darken more rapidly by exclusion from air. In short, we cannot see any valid reason why a painting in oil might not be so wrought as to preserve its tints in as great a state of purity, or very nearly so, as when first executed. Many excellent paintings by the old masters are yet in a high state of preservation; but perhaps it is only in the lights that the tints are to be found in their original purity—the shadows, without doubt, have grown deeper; and hence that forcible effect which their best pictures possess. The lights of the best paintings of the ancients have been invariably painted with much solid and opaque colour, and of course would receive the most attention from the cleaners of pictures, being so well calculated to resist the usual appliances; on the contrary, the shadows being most frequently painted in with transparent colours, and not so able to bear much cleaning or rubbing, &c., have, without doubt, been more fre-

quently neglected, especially as the depth they continued to acquire by age was found to add considerable brilliancy to the lighter parts of the painting. Thus it cannot be recommended that the artists of the present day, particularly if using colours with much vehicle, should paint their shadows with all the power and depth of the older masters' works in the state in which we now have them, but rather to leave something to the deepening effect of time.

ON PENCILLING OR HANDLING.

This is the mechanical use of the pencil, or brush, and shows more or less the degree of proficiency that has been made by the artist in the use of his materials, as well as the power of adapting certain modes of pencilling to express the different textures of objects, as the qualities of earth, stone, wood, water, &c.; in brief, every object in nature, remembering that pencilling abstractedly is little or no more than a manipulation, or dexterous use of the fingers; the art of painting consisting altogether in a highly wrought theory made visible by the hand and pencil, as the poet, by the instrumentality of his pen, makes known to us the imagery and conceptions of his mind. And it would appear that the Greeks, from the earliest times down to the more polished eras of their existence, had entirely the same idea of the art, their most copious and refined language possessing but one word to express both writing and painting.

Pencilling may be divided into two kinds—*viz.* the bold, which is suited for despatch, requiring great knowledge of drawing, as well as of the materials used in painting; and the smooth or finished style of pencilling, the opposite to the first mentioned.

Of both these modes, we find excellent specimens in the Flemish school, from the slightest sketches of Rubens

to the microscopic representations of Vanderheyden and Gerard Dow; and the subject or size of a picture alone can determine which mode is to be preferred. Perhaps, among the uninformed, more admirers might be found for the highly finished pictures of Vanderwerf, Vanderheyden, Van Hysum, Van Os, Gerard Dow, Mieris, and many others; yet the bolder styles, in the hands of a master, hold so high a rank, that no comparison can be instituted between them.

When we regard the works of those who have excelled in the various manners, we seldom or ever wish that they should have been otherwise; for if we compare the exquisitely finished cattle pieces of Berghem and Wouvermans with the bold and embossed style of Rosa da Tivoli, one cannot well imagine how either could be converted into the other without serious detriment; and the imitations of Rosa da Tivoli by Berghem or Wouvermans would be as little desirable as the imitation of the latter by Rosa da Tivoli, had such imitations ever taken place, for the completeness of character and manner would have been absent in all; and as it constantly happens that every artist falls into a manner of his own, or style of painting as peculiar to himself as his own hand-writing, the best advice we can offer is, to cultivate that style or manner to the utmost, by discarding whatever is trite or vulgar, and to regard his pencilling as a refined symbolic writing, to be as much under his command, when painting, as his pen in writing, avoiding, most carefully, that idle and common-place style that some fall into by adopting particular flourishes of the pencil to express particular things.

where they ought rather to lose their distinctness; by too much pencilling they lose their distance, and the finish, by throwing them out of place, brings the objects into a nondescript condition, neither belonging to distances for want of air, nor to foreground for want of size.

In carrying forward his work, the young artist will find that a chastened (not a subdued) mode of using his materials will advance a picture more quickly than the dashing manner too often affected; he must endeavour to think with the point of the brush, and at all times be willing to sacrifice the beauty of the pencilling to higher excellences; when these are attained, the brush immediately, and without either thought or care, adapts itself to their creation on the canvas, and often the well-practised artist, when asked how he has produced such and such appearances, becomes not a little puzzled to answer, having been absorbed more in the mental than the material part of his formations.

In the works of Leonardi da Vinci we see a very great delicacy of pencilling; and also in the paintings of Correggio, the same or superior lightness of hand is visible, as well as in the works of Giorgione. In Titian, Tintoretti, Paolo Veronese, Rubens, and the Burgognones, &c., we find a bolder style of pencilling; and again increased in vigour in the works of Lanfranc.

Many artists, by copying others, have so far lost the originality of their own styles, that their works are with difficulty ascribed to the right owners; a few we find enumerated by Richardson in his Theory of Painting, published in 1773. He names the following, as so nearly resembling each other, that they cannot easily be distin-

guished:—Timoteo d'Urbino and Pellegrino da Modena imitated Raphael. Cæsare da Sesto, Leonardi da Vinci, Schedone, Lanfranc, and others, imitated Correggio. Titian's first manner was very like that of Giorgione. Gio. Battisto Bertano followed his master Giulio Romano. The sons of Bassano, and those of Paperotto, imitated their fathers. Romanino, Andrea Schiavone, and Giovanni Battista Zelotti, severally imitated Titian, Parmegiano, and Paolo Veronese. Biaggio Bolognese imitated sometimes Raphael, and sometimes Parmegiano. Rubens was imitated by Abraham Jansens; and Vandyke, by Long John, in history, and Guildenaisel, in portraits. Masam followed Giuseppino; and Ciro Ferri, Pietra da Cortona. There is a great resemblance of Michael Angelo in some of the works of Andrea del Sarto; greater in the hands of the two Zuccaroes; and greater yet in those of Maturino and Polidore. Richardson describes Raphael as having had three manners, differing from each other, which he calls his Perugino, his Florentine, and his Roman manners, in all which the great genius of Raphael is visible; but having in his two first manners raised himself above all competition, the rivalry afterwards was only between himself in his earlier and later manners.

As it is not necessary here to describe in what way these manners varied, but merely to show how the greatest masters occasionally changed their styles, sometimes from an indifferent one to another much better, and at other times from a good style to one much inferior, which again perhaps has been exchanged for the better, we shall merely continue the list of a few more names, as we find them in the same author, without any other

comment than what he offers, being quite sufficient to serve as a necessary suggestion on the value and use of carefully examining and sedulously noting the excellences and defects of styles or different manners of the older masters. The different kinds of works in which they were engaged makes a great variety in their various manners. "Parmegiano, in his drawings, appears to be a greater artist than in his paintings or etched prints. Polidore, upon paper, or in chiaro-scuro, is one of the foremost in the school of Raphael; but give him colours, and he is removed back many degrees. Battisto Franco's drawings are exquisitely fine, his paintings are contemptible; even Giulio Romano's pencil in oil has not the transcendent merit of his pen in drawings, which have a spirit, a beauty, and delicacy inimitable; but his paintings are comparatively heavy and disagreeable for the most part, yet there are some exceptions.

"The subject also makes a vast difference in the works of these great men. Giulio Romano was fitter to paint the son of Saturn than the Son of God; as Michael Angelo was better qualified to paint a Hercules and Anteus, than the Last Judgment; but Parmegiano and Correggio, who were prodigies in all subjects that were lovely and angelical, would have been almost on a level with common men in either of those other; a Holy Family by Raphael is as the work of an angel of the highest order; a Slaughter of the Innocents by him seems to be done by one of the lower.

"It is no unusual thing for masters to go from one manner to another which they prefer, whether to imitate some other masters, or for other reasons. Spagnoletti

commenced well, imitating Correggio with great success. This good manner he forsook for the one he is so well known by, and which he continued to the last.

Giacomo Pantormo, from a good Italian, fell to imitating the coloured style of Albert Durer; Giacinta Brandi left his first Carravaggio manner, in which he was an excellent master, and applied himself to its direct opposite, that of Guido, in which not succeeding, he endeavoured to return to his former way of painting, but could never regain the ground he had lost. Even Guido himself, *animus meminisse horret!* for a time quitted his lovely angels, airs of heads enlightened with the gleams of Paradise, for the debauched, savage, and fierce oppositions of the lights and sombrous shades of Carravaggio; but his native purity soon cleared him from those black and cold Tartarian dregs.

Frequently the older masters copied ideas from each other, and not whole pieces, and kept to their own manner of executing it; this was frequently done by Raphael after the antique: Parmegiano and Battisto Franco thus copied Raphael and Michael Angelo, and so Rubens copied Raphael, Titian, Pordenone, &c., of which there are many instances. In these cases, although the master will be very evident, yet being mixed with the ideas of other men, this compound work will be very different from one entirely his own."

In concluding this portion of our work, we must express how much and how cordially we agree with Mr. Richardson in his condemnation of the Carravaggio style, and he has reason for saying that the mind is horrified in remembering the lapse of such an artist as Correggio, although

but for a short time; nor can we forbear strongly to recommend to the young artist the cultivation of those styles which lead to happier feelings; or, if his taste should point to the wilder manners, at least not to fall into the sickening representations of disease and death by a morbid choice of style, but rather to choose the animation of masters who, in their wildest moods, stopped short of those ghastly representations of the human figure so peculiar to Carravaggio, Spagnoletti, and some others, who seemed to delight in subjects, and modes of expressing them, that revolt and disgust the feelings of every well-ordered mind, and which, instead of either yielding instruction or amusement, debase and vilify the human heart, by showing that they themselves, if no others, could delight in such scenery.

ON LANDSCAPE PAINTING, &c., IN OIL.

The term Oil Painting includes a large number of varnishes, solvents, gums, and other things called vehicles, used for the adaptation of the colours to their several purposes.

Many artists paint altogether in some of the varnishes, some in a composition of mastich varnish and oil, called Macgulp (from the name of the inventor). Ibbetson was partial to an invention of his own, a mixture of sugar of lead and gum mastich, which certainly in his hands (the author having frequently seen him paint) appeared to give very great facilities towards finishing a picture at the first painting, by which mode the greatest transparency is preserved; but whether from this cause, or others united with it, his pictures have changed much from the bright and cheerful hue they always had when fresh from the studio. His mode of commencing was to make out the whole of the subject in light and shade upon a tan-coloured ground with Vandyke brown, in water colours, giving some degree of finish to the figures and foreground objects with the brown; this he was enabled to do by using (in water colours) burnt sienna mixed with a little gall for the tan-coloured tint, first laid on the prepared cloth or pannel; the gall makes the water colour adhere to the oil ground of the pannel, and upon this the

Vandyke brown works as freely as on paper; these brown shadows, when worked over with semi-opaque greys, and other transparent, or semi-transparent colours (oils), gave an extraordinary richness to the foregrounds and middle distances of his pictures.

To proceed methodically with a picture in oils, we can only follow one routine, as far as the mechanical part is concerned, *viz.* to let the first painting be solidly dry before the second course is laid on — this again must be allowed sufficient time to harden before the third and finishing paintings are applied; and in all retouchings, glazings, varnishings, &c., the picture must be allowed much time to harden, or the colours will rub off by the applications of oils, &c., necessarily used in all the after paintings; this should be well attended to in frosty weather, when some colours refuse to dry that at other times dry exceedingly well; but fortunately a warm room is generally a sufficient remedy for this inconvenience.

Spirit of turpentine is used by almost all, more or less, but when too freely, the colours lose their adhesive property, and much of that transparency essential both in oil and water-colour paintings. This quality, so desirable, is much too frequently gained by glazing, *viz.* passing a very thin or transparent colour over another brighter than the glazing colour, with some mucilaginous matter, as gums, &c., to prevent it from running down the picture, or leaving the place assigned to it, as well as to preserve the forms given to the glazings. It is true that we cannot entirely discard this process, but it should never be used when other modes might answer the purpose, for the very small body of colour in all glazing tints, not only makes

them liable to changes of various kinds, but also the tints laid on by glazing, and upon which the artist rests for some of the greatest perfections in colouring, are the first to come off whenever the picture is cleaned; for the above reasons (and they are of some weight) it is infinitely preferable to obtain transparency by solid painting, as is done in the best water-colour paintings, instead of glazings, wherever it is possible. If, for example, a broad mass of shadows occur on or near a foreground (the place where the greatest transparency of shadows is required), let it be wrought out by once painting, having the colours well ground, and finely mingled together by the spatula or pallet knife, so as to require not much stirring or mixing with the brush: let these shade tints be laid on as evenly as possible, and show more or less of the ground of the pannel by *driving* the colour more sparingly in the places where it is desirable that the ground should appear in some measure; and when these flat masses are dry, oil the picture as directed in another place, and then paint in the details, with all their proper hues, upon the flat shadows, making all the tints of lights, half-lights, or deeper shadows, as nearly as possible of their proper condition. There is this great advantage in the above method, *viz.* that the general shade tints cannot be sullied; for if the finishing colours should be laid on in some places unsatisfactorily, they can be rubbed off and changed without disturbing or soiling the general mass of shade tint.

The first painting, usually called the dead colouring, should have all its tints laid on the canvas or pannel in a firm and clear manner, without much mixing by the

brush; this prevents a certain turbid or muddy appearance that colours have when much disturbed, and laid on by the brush instead of the spatula, or pallet knife, as if their brilliancy left them in a ratio corresponding with the disturbance they receive. Every artist should have standing near the easel (the frame on which his picture is placed), at his right hand, a slab of ground glass or white marble, on which to prepare his tints to a proper colour and consistency before they are transferred to the palette; for whatever the subject may be, a first painting, when a second or third are to follow, should have a brilliant style of colouring, light, and rather gay, and as nearly as possible without cold colours, these being best and most conveniently added towards the completion of the picture, particularly as it seems to be the natural tendency of finish to cool down and subdue the brightest colours; even in the coldest-coloured pictures we begin with brighter and warmer colours than the picture is to have when finished. Whenever, in the first painting, parts may have been so fortunate as to be perfectly right in hue, those places must be sedulously exempted from further re-touching, as they will always have the greatest transparency and beauty; hence it is plain how much we ought to strive to come as nearly right in the first painting as may be within possibility.

It would appear from the practice of the best artists, both ancient and modern, that skies, shadows, and reflections in water, and in short, shadows everywhere, are best when painted at once, or so nearly finished as not to require much re-touching afterwards.

In the works of the Flemish masters, whose colours

and shadows are more near to nature than those of any other school, we see a degree of purity and clearness that can only be surpassed by nature; there is a light and truth in their deepest shadows that permit a refined distinction of objects separated from each other as clearly as we find them made out in the shadows produced by natural daylight. This clearness appears to be attained by an extraordinary care in the preparation of their colours, and a small addition of some vehicle, or perhaps wholly without, as we have seen the same results produced in the works of one of the best flower painters in oils of the present day, which for exquisite pencilling, transparency of shadows, and purity of colours, cannot be surpassed; and we know that this artist (a lady) used nothing in her colours but nut or poppy oils, and a very small portion of sugar of lead, and painted on a white ground; but this careful method will not suit where despatch is necessary; the colours must be there less finely ground, and laid on with abundance of vehicle, in order that they may keep their forms and places on the cloth; but such pictures are not for remote posterity—fifty or a hundred years will throw them out of all the dangers of criticism, and their places will be left vacant for other essayists and candidates for ephemeral or permanent fame.

Many of our living artists show by their works their *modus operandi* to be one of great care, and laudable anxiety that their pictures should descend to future ages. In those pictures we see the methods used that we have recommended above, to which they add a quiet and less laboured style in the shadows, which thus become agreeable reposes for the eye, and give additional value to

the brilliant and opaque lights, where the pencil is at liberty to return and finish as long as any thing of value can be added to them, the power of lights being generally in proportion to their opacity and substance, the very opposite qualities of shadows.

It often happens, when too strong a varnish or vehicle has been used, that the colours set and dry in ridges (particularly in warm weather), before they can be sufficiently spread or laid even. These ridges are injurious to the future workings, by preventing better forms from having effect when laid over them, and must be removed, either by a scraper, similar to such as are used by the Mezzotinto engravers, or those used for the erasure of writing; or in places where the whole has to be taken out —that is to say, down to the ground of the pannel, essential oil of spike lavender may be used, a solvent so powerful that nothing in the form of paint or varnish can resist it. Perhaps it need not be observed that the scraper can only be used with most effect when the colours are quite dry and hard.

There are so many ways of commencing a landscape, that it becomes a little difficult to say which is best, to any who may have had much practice; but in every system we may say that a well-arranged rule of proceeding is indispensable. For those who have yet to learn, and it is chiefly to those that the present work is addressed, we can easily select a well-tried method of proceeding; one that we know will be the easiest to the tyro, and, at the same time, most certain of success.

We recommend a pannel or canvas with a white ground, the lower part of the ground to be tinted with a light

shade of yellow ochre and Venetian red, or a light tint of burnt sienna (commencing in the sky, if the subject is to represent evening), and gradually becoming stronger as it approaches the foreground of the picture; the upper part of the canvas is to be left white. This warm tint may be laid on with water colours and a little gall; when dry, sketch in rather lightly, but in an accurate manner, all the foreground objects with Vandyke brown in water colours; when this also is dry, the painting may be commenced, beginning with the blue of the sky, having previously mixed on the slab a set of tints of all the different hues that are required both for the sky and distances; commence with the upper part of the sky, working downwards, endeavouring to obtain a good gradation of colours, which will be best obtained by taking the tints in the following order: *viz.* from blue into lilac, and from this into white, and again from the white through the yellow tints into orange, rose, and lastly, a rosy purple, if the horizon should be screened by clouds, as when the sun is nearly setting. Another order would be from the blue tint through the lilac, rose tints, into yellow, and from the yellow into orange, or the sky might terminate with the various degrees of yellow tint. After the sky is laid in, the mountains or distances of every kind follow, using the same tints which have been used in the sky, a little strengthened by the greys laying in every colour as nearly the hue it is to remain as possible, and growing stronger, and partaking less of grey as we approach the foreground. This will be the most difficult part of the picture, on account of the natural tendency of oil colours to become muddy and opaque, owing to their mixture

with white. For foregrounds, all the colours, most particularly the greens, are to be kept as pure and bright as possible, and this can only be done by great care in using the brushes, *viz.* not to employ a brush that holds a portion of tint in it which may have been used for a road or rock, or the lights and shadows of buildings, &c., for the greens, or the opposite; but to mix on the slab a well-ordered set of colours, and to lay them carefully in their places without confusing them with each other. To do this effectively, it is evident that the outline of the picture must be well defined, and the student would find himself greatly benefited by making a complete coloured sketch, in oil or water colours, before he commences; for it is, in painting as in every thing else, of no small advantage to know what we are going to do before we commence.

The after-paintings of a landscape, &c. so nearly resemble the proceedings in portrait painting, that the amateur or young artist will find under that head all that is requisite in the finishing.

Among the landscape painters we find that Wynants, Berghem, Wouvermans, and many others, made use of the warm coloured grounds, approaching the colour of newly tanned leather; thus, with moderate care, the warm hues so requisite in landscape painting, representing the tints of so many different objects, as earth, wood, stone, brick, &c. were easily preserved; also transparency and internal light, or what the Italians termed "the light within," so essentially requisite, more particularly on foregrounds.

Claude and Cuyp, whose pictures for air-tint and clear day-light stand pre-eminent, used different modes. The grounds of Claude were of a dull red, and are seldom

or never seen through the painting, as he used opaque colours; hence, their permanency. His pictures appear to have been commenced by painting in the sky at once, or if twice, the first painting has been much lighter than the second; the clouds seem to have been painted upon the sky whilst wet, being united with it by having their edges a little softened, and this method is at present the most general, except where the lights of clouds are to be made with well-defined edges: these are best produced by being placed when the picture is dry. The shadows of Claude's landscapes appear to have been painted, as nearly as possible, of a proper tone at the first painting, and to have received their accidental lights, half lights, and more definite marks with the darker colours, when the first painting had become dry; and this appears also to have been the method used by Salvator Rosa, in that magnificent landscape of his, now in our National Gallery. The beauty of the air-tints, in all the pictures of Claude, is worthy of the greatest attention; he even brings it forward on to the nearest objects, and by it prevents the picture from seeming to be brought down close to the feet of the spectator, a practice that well preserves the effect of extent and magnitude, the chief sources of grandeur. Teniers (the younger) produced his best works on a white ground; it is said, that he also had his colours ground fresh every day, by which he gained that particular crispness of touch so admirable in all his works. Some of his pictures were painted on dark grounds, as were also those of the elder Teniers, but neither produced works equal to those painted on white grounds.

It is not true that the Venetian masters always painted

on red grounds, although many of their pictures have this colour for their foundation. The white, cream, and light tan-coloured grounds were more frequently tried, and always with such success, that at the present day they take the lead of all other colours. The reasons why these colours should be best are obvious; they throw a light, and consequent transparency, through the work; and as all colours in oil painting have a tendency to sink into the ground and become darker, this tendency can only be opposed by a ground of sufficient lightness or brilliancy.

The portraits of Sir Godfrey Kneller, and some few after him, were painted on cold grey grounds, and these portraits, &c., have all the coldness of colouring belonging to such a substratum, and they ought to be a sufficient warning to every amateur and artist wishing to repeat the trial. A picture by Sir J. Reynolds, of the Holy Family, now in the National Gallery, either from the bad vehicles, bad colours, or being painted on a cold ground, or all these things put together, has such a wretched appearance, especially as it now stands contrasted (September 1837) with the superb and splendid picture of the Holy Trinity by Murillo, placed near it, that one cannot but lament that a man so high in talent should have been led astray in making experiments which have so signally failed, although they must eventually prove of the greatest value to the art, in such manner as the visible wreck of a first-rate more distinctly points out the dangers of the coast than a hundred floating buoys.

As a general rule for first paintings, a mixture of good drying oil, and spirit of turpentine, with as little vehicle

as possible, *or none*, will be the best method to ensure permanency of colour, the colours to be finely levigated, the ground of the pannel white, cream, light tan, or flesh-coloured; colours so wrought will in a few years become as hard as marble, will not crack, but preserve an even and firm surface; nor is it unreasonable to expect that colours in this state, and only in this state of hardness, should be best adapted for resisting the numberless influences to which oil paintings are liable, seldom having a glass before them, often subjected to severe trials in the shape of picture cleaning; to which may be added, the frequent application of a duster in the hands of a careful or careless servant; and mild as this last application may seem, it would be strange if, from the thousands of such operations as the last, which an old picture receives (however forbidden) in the course of ages, it did not contract some stains or blemishes, more or less varying according to the surface, for however well varnished it may be, the ridges or small inequalities, consisting chiefly of the lightest colours, must in time suffer some, and most often, serious detriment. All these accidents can only be provided against by solid colours, and judging from the best pictures already of considerable antiquity, we should conclude that a level surface (the effect of colours in the highest state of preparation), without the ridges and embossings of paint, too prevalent in some few of the ancient as well as modern masters, are best calculated for endurance, and, if attainable, perpetuity.

ON PORTRAIT PAINTING IN OIL.

THE colour of the pannel, or canvas, upon which the subject has to be painted is of much importance; for it is almost impossible to paint a richly-coloured picture, or a portrait, with any thing of life or warmth in it, upon a leaden-coloured or green ground; and the same observation holds good in regard to landscape painting: nor can too much care be given to the choice of the ground, which, whatever hue it may have, should be of a warm and light colour, if any other than white should be thought necessary; thus among the white, cream-coloured, light reds, yellow, pale orange, or tan-coloured grounds, a choice can be made without the risk of falling into the sombre or death-like tints, so generally resulting from the use of the colder colours for the ground of the picture; and the same care must be used in avoiding all the cold hues in the outset of the picture, for the power of reducing a warm tint to a colder one is much greater than the converse; a fact of which every artist is made painfully sensible, when he has to restore the brightness and cheerful colours of nature, or the glowing tints of health, to a picture in which all these essentials have been entirely lost or too much neglected.

It is on the purity and proper adaptation of colours that we have to depend for the general character and

expression of the picture; sunshine and gloom—morning, noon, and evening—summer and winter—mirth and sadness—youth and age—health and sickness—with the countless gradations between these opposites, have all to depend for their complete development on the colours and tints employed.

In the portraits of males, whether for historical, landscape, or portrait painting, it is usual to paint in a warmer style of colouring than for females; for children a still clearer, and at the same time ruddier style is required; but whether for male or female, adult or infant, it is certainly in accordance with the best practice, ancient and modern, to paint in all the warmer tints first, and the cool greys and blue tints last.

To select one out of the many different styles of painting as best, and to support it by argument, might be difficult; but it is not difficult to say which style or styles have received the general approbation of mankind, for those that have represented nature under its most agreeable phases or influences, have everywhere, and invariably taken a very large majority in their favour.

Every style may be classed under three divisions; the cold, intermediate, and warm: the former, which may be truly called a morbid style, being too much allied to sickness, and the total extinction of life, cannot but be in a great measure revolting, if carried to excess, and always displeasing; whilst the contrary, containing the warm tints of life, and blooming health, excite every happy feeling of which our nature is capable; hence springs that admiration which Titian and the painters of the Venetian school have so liberally received, and which will always be

continued. Their pictures possess the glowing freshness of life, and with the brilliant tints and colours of the rainbow, arranged in harmonizing variety, or in opposition, they produced a splendour and effect that has too commonly been attributed by the unreflecting to the colour of the ground on which they painted.

The first paintings of the human figure, or face, are most easily managed by using a shade tint made of Venetian Red and very little Black; and for the lights a mixture of Venetian Red and White, mixed into two or three different degrees of intensity. With the shade tint let all the shadows of the face or figure be carefully made out, using the light tint above-mentioned to vary the depth of the shadows, by working it into them, and let all the colours be very sparingly laid on the canvas. The light tints must be united with the shadows, so as to produce the middle tints; after these the deepest shadows are to be placed with a due regard to their proper position: these shadows should be made of Indian Red and Lake, very sparingly used, then with a moderately large brush, made of badger's hair, called a softener, unite and soften all these tints into each other, by passing frequently over the whole, in every direction, reducing the surface to a level by destroying the marks of the brush, and thus giving greater transparency to the tints.

The shade tint made of Venetian Red, White, and Black, agrees so well with White, and the light tints made with Venetian Red and White, that any alterations may be made, if done before the introduction of the Indian Red and Lake, without disturbing or soiling the purity of the tints, and the whole will have a warmth and clearness

that will well and solidly support the after paintings. The student should bear in mind, that if frequent or many alterations have to be made in the first painting, the lights may become of too low a tone, which would be an injury to the picture; therefore too much care cannot be taken with the colours of a first painting.

When the student has had sufficient practice in this method of commencing his portraits, he may, as his facility increases, commence with a greater variety of colours, and from the first follow Rubens' advice to his pupils, who says, "Paint your lights white; place next to it yellow, then red, using dark red as it passes into shadow; then, with a brush filled with cool grey, pass gently over the whole, until they are tempered and sweetened to the tone you wish." This process, in the hands of a beginner, would occasion a great confusion, by the general application of the grey, unless the first painting were allowed to become perfectly dry; then, if too much grey were used, it might be taken off with a cloth and oil, and it is safer to understand the above passage in this way. Yet we cannot recommend to the beginner in oil painting that powerful and loaded style of colouring used by Rubens, especially in his highest lights, for much practice must be had before the amateur or artist can keep so much colour in its place, and preserve its form and purity. When this power is acquired, the works of Rubens, Vandyke, Rembrandt, and Correggio, will afford ample lessons, if the student will carefully distinguish between the first and after paintings, so as not to confound them together.

In portrait painting it is particularly necessary that a set of tints should be mixed up previously to the com-

mencement; this method saves much time and trouble, and the student will then have little more to do than to place them properly on the canvas. The following list will be found sufficiently extensive:—

1. A TINT made with Light Red, or Venetian Red, and White; this will serve as a general tint for the lighter flesh colours. It may be used with the shade tint (No. 5) throughout the first painting.

2. VERMILION and White, used alone, for fine complexions, or mixed with the light red tint.

3. CARMINE and White; this serves for all the carnation tints of the cheeks, lips, &c.

4. RED SHADE is made by a mixture of Lake, or Carmine, with Indian Red; this is used for deepening the shadows by glazing, and will receive the cooler colours without blemish, if worked into it whilst wet.

5. GENERAL SHADE TINT is made from Indian Red and Ivory Black, an excellent colour for every purpose where it can be used, as in the flesh tints: this may be varied by making it of Venetian Red and Ivory Black. This mixture, although of great power (and by many preferred), has not the force of the Indian Red and Black.

6. ROSE TINT. A very delicate tint, or set of tints, may be made, by mixing the red shade (No. 4) with White, and they have the good property of mixing well with all other tints.

7. YELLOW TINT is made by a mixture of any of the Light Yellows (possessing good qualities), but we have preferred, for face painting, those made from Naples

Yellow and White, or Yellow Ochre of the best and lightest kind. When too much yellow has been used, the sickly hue occasioned by it is best removed by a free use of the light red tints over it when dry.

8. Cool Grey Tint is made from Ivory Black and White: this is of much use, when properly balanced with other colours, in distances, clouds, white dress, &c., but too free a use of it will give a cold and leaden appearance to the picture.

9. Blue Tint is made by mixing Ultramarine or Cobalt Blue and White. This is a valuable tint for the pearly greys of the flesh colours, and should be used in the finishing tints: in short, little or no cold colours should enter into a first painting. When lights have to be cooled down, this is the best colour for the purpose.

The above mixtures will produce as many tints by admixture with each other as the student can want in painting the flesh colours, but we recommend him to consult the article Madder Carmine, in the section on colours, which will determine him in the choice of Carmines for the tint No. 3.

There will be wanting, in addition to the above list, many colours for dress, back-grounds, landscape, and other general uses; as Vandyke Brown, and the Umbers for the hair, and all the darker shadows of back-grounds, &c. &c. The student will find, in the sets of mixed tints at the end of this work, an indication of all the tints that can be wanted for back-grounds of every kind, and where these do not exactly coincide, the approximation will be sufficiently near to point out the colours to be used.

In the first painting, according to the method recommended by Bardwell, who published a useful work on the art in the year 1773, in quarto, the student will find that more may be done than we have recommended above; it is certainly better adapted for dispatch, but will require more care, for it is evident that a large number of tints cannot be managed with the same ease as a smaller, and by not going too far in the first painting, and allowing it to dry, the student secures the drawing, and the purity of his first shadows, &c. For this reason we should recommend him to stop where we have left off, at least until he has had some practice in the manipulations of colours. In his first painting, Bardwell's method is similar to the one we have pointed out, as far as we have gone, but he adds what he calls the "second part of the first painting."

"In order to finish the first painting, improve the reds and yellows to the complexion, and after them the blues; observing that the blues on the reds make purple, and on the yellows produce green. The same method is to be understood of the shadows; but be sure to leave them clean, and not too dark: therefore allowance should be made in their grounds with the light red, because glazing them well will make them darker.

"I am convinced by experience that the grounds of shadows, in what we call the dead colouring, should be such as will support the character of the finishing colours. I say a little lighter, because the finishing of shadows is glazing, and no other method than glazing can leave such brilliancy and beauty as they ought to have; for I find that glazing the shadows in the first painting is not so proper as laying a body of shadow-colours that are very

near to the life, though a little lighter. These may be glazed and touched upon when dry with a great deal of ease; but if we begin the first painting with glazing, we shall find it will stare, and be of no use, and the solid colours which are laid on it will look heavy and dull; therefore all shadows and colours that are to be glazed should be done with colours of a clean solid body, because the glazing is more lasting and has the best effect on such colours. Remember to leave no roughness to hurt or interrupt the character of the finishing colours, which, by examining the work whilst wet with a soft brush, or when dry with a knife, to be used as a scraper, may easily be avoided.

"The Light Red and White improved is superior to all other colours for the first lay or ground, which should always be done with a full pencil, and stiff colour, made brighter than the life, because it will sink a little in drying. The greater the body and quantity of colour, and the stiffer it is laid, the less it will sink. Every colour in drying will sink, and partake, in proportion to its body, of the colour it is laid upon; therefore all the lights of the flesh, if not laid on a light ground, must consequently change a little from the life, if there is no allowance made. The shade tint for the shadows should fall into the rose tint as the complexion becomes delicate, all which should be lightly united with a soft, long-pointed hog-tool (or one made of badger's hair) to the lights, making out the whole like a Mezzotinto.

"I believe the great masters very seldom sweetened or softened the colours, but in uniting the first lay, they were very careful in preserving the brightness of their

colours, and therefore did not work them below the complexion. Therefore, the first painting should be left bright and bold, and the less the colours are broken" (*viz.* mixed after being transferred to the canvas) "the better. We should forbear using any colour that will prejudice them, and be contented to add what is wanted the next painting, where, if we fail, a clean rag will restore the first ground."

As the *modus operandi* throughout has been so well laid down by Bardwell, we shall continue our quotation to the end of the picture, convinced that, generally, it agrees so well with the best methods, that we cannot do better than to give it in his own words, and without abridgment, with one or two necessary observations on what he has omitted.

"*The second Painting.*

"Before the second painting is commenced, and every other succeeding it, after the surface has become dry (which is discoverable by breathing on it, the dry parts becoming dull, as if covered with a mist, whilst the portions still wet retain their original gloss), the picture should be rubbed first with a damp cloth or sponge, and afterwards with a small quantity of poppy oil, in order to make the after-paintings unite with the first, and thus to create an appearance of having been all done at the same time. No oil is to be left on the picture but what adheres to it after as much has been taken off as the moderate application of a piece of a silk handkerchief or sound piece of linen will perform; cotton or old linen would leave portions of the lint or down, both injurious.

"It may be here remarked, that a few particular appearances in finishing are best obtained by omitting the oil; but the sponge or damp cloth is always required, for without it the picture would resist the new colours, sometimes so strongly as to make it quite impossible to proceed, or cover even the smallest space, especially for glazings.

"The second painting is divided into two parts: one I call the first lay of the second painting, which is scumbling the lights, and glazings the shadows: the other, finishing the complexion with the purest tints, and improving the likeness as far as we can without daubing.

"Scumbling is going over the lights, where they are to be changed, with the light red tints on some other of their own colours, such as will always clear and improve the complexion, with short stiff pencils; but such parts only as require it; otherwise the beauty of the first painting will be destroyed, and we make ourselves double work.

"The light red tint improved, is the best colour for scumbling and improving the complexion in general. Where the shadows and drawing are to be corrected, we should do it with the shade tint, by driving the colour very stiff and bare, that we may the easier retouch and change it with the finishing tints.

"Some parts of the shadows should be glazed with some of the transparent shadow colours, such as will improve and come very near to the life; but be sure and not lay on too much of it, for fear of losing the hue of the first painting, the ground of which should always appear through the glazing. Be very careful in uniting the lights and shades, that they do not mix dead and mealy; for the

more the lights mix with the shadows, the more mealy those shades will appear. Thus far the complexion is prepared and improved, in order to receive the virgin tints and finishing touches.

"*The second Part of the second Painting*

"Is to go over the complexion with the purest tints; these are the colours which improve the colouring to the greatest perfection, both in the lights and shadows. This should be done in the same manner as we laid them in the second part of the first painting, that is, with the reds, carnations, yellows, and blues; blending them with delicate light touches of the tender middle tints, without softening. We should leave the tints and these grounds clean and distinct, and be content to leave off whilst the work is safe and unsullied, leaving what is farther required for the next sitting; for in attempting the finishing touches before the other is dry, we lose the spirit and drawing, and dirty whatever we touch.

"*The third Painting or Finishing.*

"It is to be supposed the complexion now wants very little more than a few light touches; therefore there will be no occasion for oiling.

"Begin with correcting all the glazing; first, where the glazing serves as a ground, or under part; then we should determine what should be done next before we do it, so that we may be able to make the alteration on the part with one stroke of the pencil. By this method we preserve both the glazing and the tints; but if it happen that

we cannot lay such variety of tints and finishing colours as we intended, it is much better to leave off while the work is safe and in good order, because those few touches which would endanger the beauty of the colouring may easily be done, if we have patience to stay till the colours are dry, and then, without oiling, add those finishings with free light strokes of the pencil.

"I believe that Rembrandt touched upon his best pictures a great many times, letting them dry between; it was this method most certainly which gave them that surprising force and spirit, which is so inimitable.

"I find it much easier to soften the over-strong tints when they are dry than when they are wet, because the very colours can be added which are wanting without endangering the dry work."

In the above extract, it is evident that Bardwell writes like a practical man, and so much useful matter is contained in the whole, that although lengthy, we feel no hesitation in laying it before the young oil-painter, as a foundation on which he may safely construct any other mode more agreeable to his taste or inclination; but whatever method he may fall into, it must be that of system, otherwise he will find oil-painting amongst the most intractable (practically speaking) of the arts. Nor must we forget to remind him of a circumstance already alluded to, but which cannot too much be enforced, namely, to make the proper allowance for the change of tints by drying, and which change is effected by a double operation: firstly, by the white (the heaviest in the mixture of tints) falling to the cloth, and leaving the lighter colours

on the surface in the incipient process of drying; and secondly, by the surface of every tint and colour drying, in the course of a few months, and often in a few days, with a surface covered by an infinity of wrinkles, particularly where any body of colour has been used. These absorb the light, therefore such a surface, holding shadows in each wrinkle (even when not visible to the naked eye), must have a greyer hue than when first laid on the cloth, and we think that the beautiful surface, as well as purity of light, which we often see in old pictures, must in many instances have been produced by allowing much time after each course of painting, so that when perfectly hardened, the artist might be enabled to take off a small portion of the surface, and see better what would be necessary in the future retouchings; nor is it at all improbable but that very many second-rate pictures have benefitted by the several scourings that in a lapse of ages such pictures invariably receive from the class into whose hands they are liable to fall, and the retouchings consequently necessary after such severe cleanings, which in frequent instances have been added by artists of much greater talent than the original painter.

An amiable and highly talented female artist, whose best works are in oils, has assured the author that she never could obtain the brilliancy and finish which she felt to be requisite, and in which her works excelled, without taking off the surface of the first painting after it had become hard. This was done with exceedingly fine glass paper, that had been previously so well used as to take off much of its sharpness, so as to prevent the possi-

bility of scratches, or too much of the surface being carried away. This lady often finished, or very nearly, her works (flowers, fruit, insects, &c.) at the first painting, and always either on a white or lemon-coloured ground, which sustained with extraordinary brilliancy all the crimson, scarlet, and yellow tints—in short, every colour, except the blues, violets, and absolute whites.

BACKGROUNDS.

In portraits, as well as historical paintings, &c., &c., the backgrounds hold an important place. The best intentioned compositions may be ruined by negligence in this particular; or, on the contrary, may be most efficiently aided by a just adaption of objects, colours, and chiaroscuro, to the subject of the picture.

The background "must be in unison with the figure, so as not to have the appearance of being inlaid, like some of the oldest masters' portraits, which are often on a bright green or blue ground. To prevent this effect, the ground must partake of the colour of the figure; or, as expressed in a subsequent line, receive all the treasures of the palette.

"The background regulates likewise where and in what part the figure is to be relieved. When the form is beautiful, it is to be seen distinctly; when, on the contrary, it is uncouth, or too angular, it may be lost in the ground. Sometimes a light is introduced, in order to join and extend the light on the figure; and the dark side of the figure is lost in a still darker background; for the fewer the outlines are which cut against the ground, the richer will be the effect, as the contrary produces what is called the dry manner."

"The dark and warm shadows should be laid before the colours that join them; this we should do with the dark shade (Black and Indian Red) and Umber drove (spread thinly on the cloth) with drying oil; I say before the colours that join them, because if those colours were laid on first, they would interrupt and spoil the transparency, which is their greatest beauty. The more the first lay is drove, the easier and better we may change it with the finishing tints; therefore we may lay them with the greater body.

"The second part is to follow directly, whilst the first lay is wet, with those tints we think to be the most proper for harmonizing and finish.

"Begin with the lights first; and remember as we heighten and finish them, we do it with warmer colours, and let those be accompanied with fine, tender, cold tints. The lightest part is generally nearest to the shadowed side of the head; this is the part which governs all the rest, and should be painted with a variety of light, warm, clear colours, which vanish and lose their strength imperceptibly in the gradations; these should be laid with a kind of a cloudy touch rather than spotted; and we must take care that we do not cover too much of the first lay, but consider it as the principal colour.

"From the lights we go to the gradations and shadows; for when the lights are well adapted to produce and to support the head, it is easy, I think, to fall from them into whatever kind of shadows we shall find most proper for our work; then soften and blend the whole with a large, soft hog's-hair tool, which, with the strength and body of the drying oil, will melt and sweeten all together

in such a pleasing manner, that it will seem surprisingly finished.

"Remember the tints will sink, and lose a little of their strength and beauty in drying. All the grounds, as walls, &c., should be finished at one painting; but if they require to be changed, we may glaze them with a little of the dark shade and drying oil, drove very sparingly on, which, with a few light touches of the colour that is wanting, we may improve their hue. The dark shadows may also be strengthened and improved by glazing, which should be done after the figures are near finished, for fear of making them too strong."—*(Bardwell.)*

"Fresnoy says, 'Let the field, or ground of the picture be pleasant, free, transient, light, and well united with colours which are of a friendly nature to each other, and of such a mixture, that there may be something in it of every colour that composes your work, as it were the contents of your palette.' Du Piles says, 'Variety of tints, very near of the same tone, employed in the same figure, and often on the same parts, with moderation, contribute much to harmony.'

"The sky should be broken with the lead and the flesh tints; the Murrey Tint (Indian Red and a little Black, and White brought to a purplish tint) is of great use in the grounds of distant objects, and the Umber and dark shade in the near grounds; the Greens should be more beautiful than we intend them to remain, because they will fade and grow darker. After all is painted, we should go over the whole very lightly with the softener, as we did the grounds, which will make it look agreeably finished."

Before we add the concluding portion of the above extract, we must observe, that the brightest greens are produced by painting them very much lighter than they are to remain, and then glaze them down to their proper hue, either by Yellows, or Brown Pink, or any mixture of transparent colours that may be suitable; thus the brightest lights, or greens, and some other colours, are best got by making them perfectly white on the first painting, and then bringing them to their right hue by glazing, with as little oil or vehicle in the colour as possible, to ensure their permanency.

"Vandyck's general method was to be very still and mellow, and to break the colours of the ground with those of the drapery. This will certainly produce harmony, the principles of which method belong only to the art of colouring; but it is the knowledge of light and shade which gives that surprising force to Rembrandt's works. I have seen a picture of a lady, where he has made the ground just light enough to show her complexion and hair, which was a dark brown, in the greatest perfection; the ground was a wall, which near to the face was lighter than the shadows of the flesh, and the light diminished so artfully in the gradations, that though the part round the head was much darker, yet it appeared to be of the same colour with that near the flesh. I must own I like this method of relieving the head from the ground better than Vandyck's method, where he has made the ground almost of the same colour with the hair; and though I admire his method of breaking the colours of the ground with those of the draperies, yet I am not so much pleased where there appears too near a sameness,

as I have seen in some of his pictures, where he has carried this principle so near, that it is almost imperceptible. In Rembrandt's pictures, the lights and shades are as visible as those in his prints, and are remarkably broad, clear, and still; the shadows are very warm and thin, and look as if they were painted all at once with plenty of colour, which appears transparent. This transparency has been obtained by glazing the dead colouring."

The student in painting will do well if, instead of painting too much from his own ideas, he would be content to copy from the best masters in the outset; and, as Sir Joshua Reynolds observes, "Painters should go to the Dutch school to learn the art of painting, as they would go to a grammar school to learn languages. They must go to Italy to learn the higher branches of knowledge." Rubens, Vandyck, Snyders, and Jordaens, to whom we must also add Teniers, are the best masters in colouring. In the works of Rubens, the tints will be found well made out, and so detached from each other, that the student can have no trouble in detecting them; he will find them in their places, standing pure and unsullied, and so systematically arranged, that one of his pictures, to any one who has considered the theory of painting, is in itself a perfect and complete school. In the pictures of Titian, the pupil does not so readily see his way; their splendour confuses, and their tints are so richly wrought into each other that their places are only to be found in masses. Although differing from the distinctness of Rubens, the works of Correggio are more easily comprehended than those of Titian; nor must we

overlook the inimitable Vandyck, who, in our estimation, yields to none, and in warmth and delicacy of colouring seems to unite the qualities of his master Rubens with the beauties of Rembrandt, avoiding that solemnity of effect which the latter, by the singleness of his lights, so frequently had.

ON VARNISHES, VEHICLES, OILS.

VARNISHES are usually made of resinous gums dissolved in spirits of wine, or some fixed or essential oil.

They should possess, in the highest degree, transparency, a clear glassy surface when dry, and work freely from the brush; a good varnish should also be colourless when spread over a surface; but as this quality is not easily obtained, where it has colour, it should be of the amber, or yellowish cast, as these tints, in the minute quantity given to a picture by its varnish, produce much less injury to the whole than the greens or blues. The only varnishes that have yet been obtained entirely without colour, are those made with spirits of wine; but these (usually called spirit varnishes) are quite unfitted for the artist's use, belonging more to the manufacturers of polished woods and furniture. We are thus left with only the fixed and volatile oils, as a solvent for the gums most in use.

Experience has also confined the makers of varnish to a small number of the gums, and for their solvent to a still smaller list. Of the latter it appears that the oil of turpentine and the oil of lavender are the only two essential or volatile oils in use, but principally that of turpentine.

Of the fixed oils the number is nearly as small, *viz.* that which is expressed from the white poppy seed, the nut

oils, and linseed oil; these are the only fixed oils, we believe, in use at present for the manufacture of the best varnishes, all of which should possess the property of quickly and solidly drying. The gums most in use are those of copal, mastich, sandarac, with which are mixed sometimes a softer gum, as elemi, anima, camphor, and turpentine or common resin.

The balsam of copaiba (capivi) is frequently used when a quick drying varnish is wanted; but in a few years, and often in much less time, the surface cracks into an infinite number of small circular fissures. Sometimes artists have used this balsam as a vehicle in colours, and we believe that the same cracking property is continued in a less degree. As a varnish, it is merely necessary to dissolve it in cold spirit of turpentine, the solution takes place immediately, and it is then ready for use. Where despatch is required this is a valuable varnish, for it can almost as easily be taken off the picture as laid on, provided the surface of the painting be perfectly hard, otherwise the application of the spirit of turpentine and cloth, or hog's-hair painting brush, necessary in the cleaning-off process, will bring off at the same time all those colours which are not yet hardened enough for resistance. This remark will hold good with regard to the removal of every varnish, and most when the essential oil of spike lavender is used, as the oldest paint cannot resist this most powerful solvent.

The essential, or volatile oils, are so called because a small quantity of heat only is required to evaporate them. They are obtained from all kinds of vegetable, and sometimes animal matters, but chiefly from the roots, flowers,

seeds, &c. of vegetables by distillation. They may also be obtained by expression, but the former mode is most general. When fresh, and in their best state, the volatile oils will not stain paper, the whole evaporating; but if they have been exposed to the atmosphere any time they lose some of their volatile properties and leave a residuum.

The most useful to the artist, of the volatile oils, is that of turpentine, and next to it the oil of spike lavender; as a solvent it is invaluable, especially when, in painting, the stronger gums, varnishes, &c. are used as vehicles; these often drying quickly, could not be removed from the palette to the picture without its aid; and again where, under peculiar circumstances, hardened colours have to be removed from the picture, the essential oil of lavender is a sure resource; its strength, if too great, may be reduced by spirit of turpentine. This is too often done before it comes into the artist's hands, and in short with all the expensive essential oils, which being costly offer many temptations; and it is not a little amusing to consider that firstly, our nutmegs, cinnamon, and other spices cannot be had until they have parted with their oils by distillation, so neither can we have these oils until they also have undergone a few sophistications; the oil of cloves, for example, is known to be of so acrid a nature that it will, when pure, burn the skin where it touches, and yet no one has ever been burned by using the article called oil of cloves. These hints are necessary to the artist, that he may be aware of the troubles he has to expect from defective materials.

The following mode of testing an adulterated essential oil will be found serviceable. If the adulteration has

been made with spirits of wine, pour a little of the suspected oil into a glass of water, stir them well together, and the water will absorb, with some appearance of milkiness, any spirit of wine (being an aqueous spirit), and the essential oil will be left floating on the surface. If we suspect that an expressed oil has been used in the adulteration, we must add spirit of wine; this will dissolve the essential oil, and leave the expressed oil separated, and without mixture. But the most frequent adulteration to which an expensive essential oil is subjected, is that of the essential oil of turpentine; a piece of cloth dipped in this kind of mixture, and made hot before the fire, soon detects the turpentine, by the entire dissipation of every other scent that only of the turpentine remaining.

The essential oil of spike lavender is extracted by heat from the tops of lavender, which is grown for this purpose in great abundance round London, in extensive fields, commonly called physic gardens; at present a great quantity is grown between Mitcham and Croydon, in Surrey. A great deal of the essential oil is contained in the calyx of the flowers, and is obtained by distillation, going over with the steam in form of vapour at the usual boiling point, and is found floating on the surface of the water, from which it is then taken. Both the essential oil of spike lavender, and that of rosemary, will dissolve gum copal, probably from both having a small quantity of camphor in their oils.

Spirit of turpentine is in such frequent use by the artist, that, unless it be of the purest quality, he will be in continual difficulties. If a piece of white paper be

dipped in pure spirit of turpentine and held to the fire, the spirit will so perfectly evaporate, that not the smallest stain will remain, and the paper will receive writing, as before the application of the spirit. If any impurity should be in the spirit, then the paper will appear stained as if with grease, and refuse every attempt to write upon it.

Although not in much use, yet, as an experimental solvent, the SULPHURIC ETHER may be mentioned as one much superior to spirit of wine in certain cases, and in some superior to all. It is most used in the composition of copal varnishes, and were it not so expensive, this volatile liquid, perhaps would be found to have valuable uses, to which it has not yet been applied, this is also used with spirits of wine for taking off varnish, and its too great action, or when it has answered the intended purpose, may be checked by olive oil, or water in which a small portion of soap has been dissolved, and lastly clean water.

Ox-gall, when laid on a picture in quantity, and allowed to remain for a few days after it has become quite dry, clears off the common impurities to which old pictures are liable, in an admirable manner, by the simple process of clean water and a sponge.

For the removal of a strong varnish, as copal, &c. &c. a mixture of spirit of wine and spirit of turpentine will be required; to make these two spirits unite, a small quantity of the salt of tartar is to be added. Every time this is used the bottle is to be well shaken, and very little poured on the picture, which is to be rubbed with a small piece of flannel; then lay on the part rubbed a few drops of oil of olives, to retard the action of the spirits. These operations are to

be repeated over the whole picture, frequently changing the pieces of flannel, and as frequently applying the olive oil, in order to see what progress has been made. The picture lastly is to be washed with a sponge, with water and a little soap, afterwards with clean water, and then covered with a fresh varnish. If any stains should be found on the picture so unconquerable as to remain after the above processes, a little oil of spike lavender will certainly remove them; but the greatest care, as we have before observed, must be taken in using this essential oil; it softens old paint so quickly, that there is scarcely time to apply it, and the olive oil, before it has gone too far.

Among the powerful solvents are to be classed the alkalies, the safest of which is the carbonate of ammonia; this is generally too strong to be used alone, and must be weakened by the addition of water, and the sponge and clean water frequently used, in order to see the progress making, as well as to prevent mischief.

Fixed Oils are so called, because heat will not volatilize them without decomposition. At their boiling heat (600°), a white vapour is disengaged, composed of carburetted hydrogen, carbonic acid gas, and oil, leaving as a residuum only a small portion of charcoal.

The cold drawn, or expressed oils, are the purest in colour, but these are always either slow in drying, or altogether refuse, without much preparation. On the contrary, those which are hot-drawn readily dry and become hard, two of the most valuable properties they can have for the artist's use.

Oils obtained from the hazel and walnuts are of a beautiful transparent and limpid nature, and, when fresh-

drawn, superior in taste to that of the olive, preserving well the delicate flavour of the kernels from which they originate; and it is a fortunate thing for the artist, that their general properties are so excellent, that it becomes of little importance, when purchasing the oil of white poppies, if a good nut oil is given to him in place of it; for fluidity and absence of colour, we should certainly choose that from the poppies, but the difference in a finished picture is not perceptible.

We do not recommend the artist to make his own materials, and, least of all, the different kinds of varnishes, as they are for all occasions much better prepared by those whose business is solely directed to that point, and every thing he can want may be had at all the regular colour warehouses and shops; but it is well he should know how, and with what materials, they are prepared, that he may avoid heterogeneous mixtures in his experiments, by being made aware of the nature of the materials, colours, &c. in which he has to work; without this knowledge, he must naturally blunder, or grope his way through an obscure path, in new attempts at combination; when, by knowing his materials, &c., and a very little chemical knowledge, his trials may always be conducted with a result not very far from his anticipations. On this ground, we feel that no apology is necessary for the explanations which follow; and it may occasionally happen that some, placed far from the advantages of a city or large town, will profit by one or other of these different instructions to the artist's manipulating assistant.

Drying Oil.—This property may be given to the linseed and nut oils, by boiling them in an earthen pipkin,

with about half an inch depth of white lead in the bottom of the vessel. This operation should be performed out of doors, or in a place where there cannot be much danger from combustion. Should the oil take fire, it must be removed, and placed on the floor as quickly as possible, and covered with a board; or it would be better if the vessel had an earthenware cover properly fitted to it. Water thrown on burning oil causes a most dangerous explosion. Although we use the term boiling, the oil is never carried to the boiling point. The proper heat is known by dipping a feather into it; if sufficiently heated, the feather will change colour, and become parched and shrivelled, in the same manner as when put into a lighted candle.

The following process for giving a drying quality to oil of poppies, we have extracted from "Tingry's Varnishers' Guide," a work containing much very useful information for those engaged in the manufacture of varnishes.

"Into three pounds of pure water put an ounce of white vitriol, and mix the whole with two pounds of oil of white poppy seed. Expose this mixture in an earthern vessel, capable of standing the fire to a degree of heat sufficient to maintain it in a slight state of ebullition. When one-half or two-thirds of the water has evaporated, pour the whole into a large glass bottle, or jar, and leave it at rest till the oil becomes clear. Decant the clearest part by means of a glass funnel, the beak of which is stopped with a piece of cork; when the separation of the oil from the water is completely effected, remove the cork-stopper, and supply its place by the fore-finger, which must be applied in such a manner as to suffer the water

to escape, and to retain only the oil, which, when prepared in this manner, becomes, after some weeks, exceedingly limpid and colourless.

"Many artists reject every preparation of oil in which water has been employed as an intermediate substance. The drying material may, it is true, be boiled with the oil without water, but as the heat administered to the oil will be so much greater, the probability is that more or less colour will be added to it, and consequently, for delicate colours, the oil will be totally unfit. In the process here given, the oil becomes charged with a little water, by which it acquires a nebulous appearance, and retains it for several weeks. This interposed water gradually separates itself, and at the same time carries with it a mucilaginous matter, a little altered, the complete separation of which adds to the extreme purity of the oil. Perfect limpidity is the surest sign of the absence of all its foreign particles. A slight heat accelerates the clarification of oil prepared with water."

We shall borrow another process for the same purpose from the same author. "When the long-continued cold of winter gives to snow a pretty dry consistence, take linseed oil, nut oil, or oil of popies, any quantity, and mix it with snow, kneading the mixture in a basin with a wooden spatula, or in a mortar with a pestle. Form it into a solid mass, and place it in an earthen glass, or porcelain vessel, with a large aperture, with a cloth to prevent the introduction of foreign bodies. Expose the vessel in a place accessible to the cold, but sheltered from the influence of the solar rays. On the return of a milder temperature the snow will dissolve into water, which will

separate itself from the oil, with the impurities of which the water will be charged. If a severe temperature continue two months, the oil will acquire in a high degree its drying quality. The oil is decanted from off the water, or it is removed with a spoon, and put into a bottle. Rest, by separating the interposed particles of water, is sufficient to clarify; this separation may be expedited by exposing the oil to the heat of a balneum mariæ."

Tingry found that by treating the oil of hempseed in this manner two distinct oils were obtained, one lighter than the melted snow, and the other heavier, which of course remained at the bottom, leaving the water between the two; the upper stratum of oil formed two zones, the one clear, the other the colour of a chamois or tawney.

In preparing oils by heat, an addition of sugar of lead will also give the desired property of drying; and an onion or head of garlic put into the oil will indicate, by its becoming brown or burnt, the time when the oil has arrived at a sufficient degree of heat. White vitriol will also serve in place of litharge or white lead; the quantities may be generally estimated at one ounce of sugar of lead, vitriol, &c., to one pound of oil. Although all the fixed oils require a heat of 600°, to arrive at the actual boiling point, yet long before this they will throw off a highly inflammable vapour from their surface. Even at a heat of 370°, the greatest care is required, for in this state, the approach of the smallest flame will set fire to them, when they become completely spoiled for the use of the artist. Of course daylight is to be taken for operations of this class, as the approach of a candle or lamp must always

be attended with the greatest risk. Drying oils (particularly that of linseed) are used (when in a fatty state from exposure to sun and air) by the gilders on wood in those processes called oil gilding, and which endure much better the effects of air and moisture than water, or burnished gilding.

The varnish most in use for the protection of paintings, is that which is made of gum mastic, notwithstanding the superior qualities of copal; yet one observation we must offer on varnishes, which we think of some weight, when the preservation of the picture is to be considered, *viz.* that the varnish should partake as much as possible the qualities of the vehicle that has been used in the painting, that the expansions, and contractions, &c., &c., occasioned by atmospheric changes, may always be similar. Thus, where mastic varnish has been used as the vehicle, or any composition with gum mastic as a principal component, certainly mastic varnish will be better for the picture than copal; and again, where copal varnish has been used as the vehicle, it will be better to use it as the finishing varnish over the whole; for each gum has properties of its own, and in some measure dissimilar, the mastic being very much the softer of the two.

All the varnishes are made in a great variety of ways, or rather proportions of ingredients. For mastic varnish the following formula is given by Tingry as the best for a picture varnish: "Take of gum mastic cleaned and washed twelve ounces, pure turpentine one ounce and a half, camphor half an ounce, white glass pounded five ounces, oil of turpentine thirty-six ounces; the mastic is to be reduced to a fine powder and mixed with the

glass, these are to be enclosed in a matrass, which is to be placed in a vessel of water, and the water kept boiling for two hours; when the solution is completed the turpentine is to be added, the matrass being still left in the water for half an hour, it is then taken out to cool, constantly stirring it with a stick, and the day after it is to be filtered through cotton; the camphor is to be cut into pieces, and added with the turpentine." If this varnish be intended for old pictures, or those already varnished, the pure turpentine may be left out; the addition of the turpentine, by giving greater softness to the varnish, renders it more fit for new pictures, the colours of which are not yet perfectly hard.

Copal varnish is a mixture of copal, Chio turpentine, and oil of turpentine; of the copal, one-half the quantity that is used of the Chio turpentine is sufficient; of the oil of turpentine is added a quantity equal to the solution of the whole.

Another formula, called Sheldrake's copal varnish, is to take of copal two ounces, spirit of ammonia two ounces, of camphor two drachms, rectified oil of turpentine one pint; "stop the vessel with a cork cut in groves to permit a portion of the heated vapours to escape; bring it to boil over a brisk fire, so that the bubbles may be counted as they rise; keep the mixture at the same heat, for if the least irregularity or over-heating takes place, it is useless to proceed; when the solution is complete, let the vessel be quite cool before it is opened." We give this form as it has been given by Mr. Sheldrake: but it is obvious that it is in many respects a very inconvenient process, and requires more care and circumspec-

tion than the varnish-makers perhaps will be disposed to bestow upon it. There is no doubt, however, that a good and colourless varnish may be obtained by such a process.

The above formulæ are also borrowed from the same useful work, to which we can with confidence refer our readers who may wish for further information on this subject, originally written by Mr. Tingry, professor of chemistry of Geneva, and one of the best works that has yet appeared of its kind. He mentions a copal varnish that in durability had surpassed enamel; it had been tried on the lid of an ivory box, and worn in the pocket with keys and other substances, till at length the metallic ring on the box, which served as an ornament, was quite destroyed, whilst the varnish remained uninjured. The varnishes that are most durable for purposes liable to certain degrees of violence are called "the fat varnishes," and have certain portions of the drying oils in their composition; also caoutchouc (Indian rubber), amber, &c. These are slower in drying, and are used for carriages, iron or brass lamps, tea-urns, &c., &c.

For new pictures, *viz.* those which are not yet sufficiently hardened to receive their final varnishing, the best application as a substitute is the white of eggs, well beat up with a little common colourless spirit, as whisky, Hollands, &c., to which a very small quantity of the juice of garlic has been added, and laid on the picture whilst lying in a horizontal position, will be sufficient; the picture to remain in this position until it is dry. The juice of garlic is added to prevent the flies from settling on the picture; plain water with a sponge will remove

this varnish when necessary. Before any permanent varnish is applied, it is well to wash the picture with a sponge and soft water, and to have it made perfectly dry with soft cloths, or the varnish will refuse to lie on it, as has been observed with regard to second and after paintings.

VEHICLES.—We have before given our opinion against the use of much vehicle in painting, but as they are used by many, we cannot but mention a few of those generally considered the best; perhaps the least injurious may be the following mixture:—Boiled nut, poppy, or linseed oil, to which add one-third of best rectified spirit of turpentine. Wilson, the celebrated landscape painter, used linseed oil and spirits of turpentine, mixed in equal quantities, and exposed to the air till nearly half of the mixture had evaporated, becoming thick, and of the nature of dissolved gum, adding afterwards a small portion of melted bees' wax.

Some use spirits of turpentine alone, on account of the purity it gives to all the lighter colours, but its adhesive qualities are so small, that the colours thus used will scarcely bear to be retouched or varnished, and a few trials only are sufficient to show its unfitness when not in combination with a fixed oil, as that of poppies, nut, or linseed, or some of the varnishes.

A vehicle in very general estimation, and probably more esteemed than it deserves, is made by a mixture of any of the boiled oils with about one-half, or from that to an equal quantity, of mastic varnish; the varnish is to be poured into the oil, and the whole mixed by gently shaking it together, by which it gains a jelly-like consistency: much stirring destroys, in a great measure, this gelatinous

quality. It is best to make this vehicle in small quantities, when wanted; it is called Maguilp.

A vehicle which gives great transparency to colours, and also the property of preserving accurately whatever touch or shape the brush has given to them, likewise the very useful quality of being worked upon a second time whilst wet, when dispatch is required, is made of the purest gum mastic and sugar of lead, about equal parts (by weight), ground very fine with much oil (linseed, poppy, or nut oils, *unboiled)*. If this did not change, but preserved all its original beauty, it would make one of the most agreeable vehicles with which we are acquainted; but many pictures that we know to have been painted with it have very greatly changed from their original hue, therefore it cannot be recommended when permanency is desired.

The two following vehicles are now in use by eminent artists, and have been considered among the best, nor do either of them seem very likely to effect much change in colours when moderately used: the first consists in simply tempering the colours (taken as they come from the colour-grinder) with copal varnish, the strength of which has been a little reduced by spirits of turpentine, and to continue the use of it with the brush or pallet knife until the piece is finished. We have seen some beautiful pictures executed with this vehicle, which for delicacy of tints, handling, and other valuable properties belonging to the executive, cannot be surpassed.

The next vehicle we recommend is composed in the following manner: Take a moderate quantity of water saturated with sugar of lead—take also an equal quantity

of water fully saturated with white soap, which is best effected by placing the jar, containing the soap and water, in a slow oven for about twelve or fourteen hours, adding occasionally a little water as it evaporates; then mix both, and stir them well together. The acid of the sugar of lead uniting with the alkali of the soap, leaves the materials of the soap in a pulpy state, and this is to be mixed with the white hard varnish (sandrach), which becomes softer by this pulpy addition, and more fit for use. This vehicle was held in great estimation by the late Sir W. Beechy, and as far as we are enabled to judge, very deservedly, as it gives to colours a brightness that is quite unapproachable by using any of the fixed oils, besides a spirit and freedom in laying on, that can only be truly appreciated by those who have had much practice in painting.

ACETATE, or sugar of lead, ground with boiled oil, poppy, nut, or linseed, can scarcely be called a vehicle, being merely used to force the slow-drying colours, such as Vandyke Brown, Blacks, &c., to dry when frosty or cold weather prevent this very necessary operation from proceeding at the same rate with colours of better qualities. This mixture should be ground exceedingly fine, by which its desiccating properties are greatly increased. It is kept in bladders and metallic tubes at all the colour shops, and known by the name of "drier."

"White wax (bleached bees' wax) is frequently used in spirits of turpentine as a vehicle; this gives a beautiful clearness and texture to the colours, nor is it liable to change, but it is with great difficulty compelled to dry; consequently, second paintings, &c., where the wax has been previously used, will frequently come off entirely

from the canvass, and with them all the former paintings. The method of preparing this mixture is to dissolve as much wax in rectified spirit of turpentine as the spirit will hold in solution, assisted by a moderate application of warmth, and when used, to have a strong drying varnish added to it, as mastich, sandarach, or copal.

A substance has recently been prepared, which probably, when well understood, may prove quite as useful, and perhaps work more freely from the brush, than the different compositions of bees' wax. This substance is a preparation of tallow, obtained by enclosing it in a coarse linen bag, and subjecting the bag to a very great pressure by machinery, which forces from the tallow a strong dark-coloured oil, leaving in the bag a substance not unlike powdered bees' wax, perfectly white, and which is used in the manufacture of wax, and other kinds of candles. The oil is consumed by the soap makers. Any good method of using this expressed tallow for the artist has not yet been discovered, as far as we are informed, and it is yet of too recent a date to have had its good or bad properties, whatever these may be, satisfactorily made out. The only difficulty of any amount, in our estimation, would be to make it dry well, and in any attempt for this purpose, we would recommend to leave the expressed tallow in its simplest state, and to make the trials with some of the hard varnishes and spirits of turpentine.

ON

PAINTING IN WAX, OR ENCAUSTIC, GROUNDS.

A METHOD of painting in wax, or rather of painting in water colours, and fixing them by wax, as described by Pliny, was invented, or re-invented, by Count Caylus, and highly extolled at the time; yet it does not seem to have been adopted to any useful extent: but as the method is ingenious, and may also supply hints to the speculative artist, we subjoin a short account of it. The cloth, canvas, or pannel, is first to be prepared by rubbing it well over with bees' wax near a fire, so as to allow the wax to be well melted into the cloth, &c. The colours are to be mixed with simple water; but as they will not work or lie on the wax, the picture, or prepared cloth, is to be rubbed over with the finest chalk or whiting; this will make the colours adhere, and when the picture has received them it is to be placed near a fire, so that the wax may melt, and thus fix the colours. It is stated, that pictures done in this manner, unlike those done in oils, may be seen in any light, without the least false glare, which the latter take when not viewed from the proper station, and also that, however soiled they may be, they are most readily cleaned, and that they will endure without the least change for an indefinite length of time. These are invaluable

qualities; but the difficulty of arranging colours mixed in water, which in fact are body colours, or what is called distemper, without the size, to any great degree of refinement in tints, is so great, owing to such colours being so widely different in their wet and dry states, that we fear it can never be carried to such perfection as in any way to rival the high state to which the oil and water-colour paintings of the present day have been brought; and notwithstanding the colours take, when melted into the wax, very much the appearance they have whilst wet, the practical artist will see all the inconveniences attending the process, and estimate it accordingly.

In a work written by J. H. Müntz (published 1760), from which we have taken the above, the author gives an account of a portrait he painted in this manner, as a dead colouring, and finished afterwards in oil colours upon the wax (a copy from one by Sir Godfrey Kneller), which he says not only "succeeded to his own satisfaction and surprise, but to every body's else that saw it." He also says, "the brightness and transparency of its colours is not to be conceived; I copied the same head again in oil colours only, and with all imaginable care and attention, but the colouring of the latter looked dull in opposition to the other. To give reasons for this incident is more than I can do."

Throughout the work, Müntz is very sanguine as to the value of this mode of painting (the encaustic), nor are we surprised that the very obvious reason of finishing his first essay on a wax ground, which the first picture amounted to, neither more nor less, and the second on a cloth or

panel, such as is usual in oil painting, and consequently in some measure absorbent, should make all the difference: and we here arrive at the point which induced us to give a description of this encaustic, or painting in wax, for it is well known to practical men how much painting and repainting is required to make a picture in oils bear out, as colours, when painted in the common grounds in use, sink very greatly into them. In short, to such an inconvenient extent does this go, that both portrait and landscape painters who are at all anxious about the future appearance of their works, are obliged to keep them long in hand, that the colours may sink, and again be brought out by fresh paintings. In water-colour painting, either for landscape or miniatures, or any other kind of portraits, this is not the case; we proceed day after day until the piece is finished, without the least apprehension of any change; nor do we see any reason why, by the use of such grounds as may be made by wax for oil colours, we should not do the same in oil painting, allowing only the necessary time for the drying or hardening of the colours.

The admirers of absorbent grounds say that they make the colours more pure, by absorbing the oils or vehicles with which the colours are tempered; this must be granted, but we must also inquire how much more oil, &c. is required to make colours work on an absorbent ground, than on one which is not in the smallest degree absorbent, and where the colours are sufficiently and finely ground. This is an interesting subject, and worthy of more serious consideration than we have space to allow for it; but we cannot leave it without stating our firm belief, that either

the wax, or newly-invented Indian-rubber grounds even, with a *slightly absorbent surface laid over them*, would do infinitely more for the preservation of pictures in oil than any other grounds that are now in use.

In the *Transactions* of the Society of Arts for 1807, and before this, in 1792, we find mentioned an improvement on the encaustic painting, invented by Count Caylus. This improvement was introduced by Miss Greenland. The first process is to dissolve four or five ounces of gum arabic in eight ounces of water in a glazed pipkin; to this add seven ounces of gum mastic in powder; the vessel is then to be placed on a moderate fire, and the contents to be kept stirred until the whole mass has formed itself into a paste; five ounces of white wax are to be put into the vessel, and stirred until it boils; immediately on boiling remove the vessel, and put in sixteen ounces of distilled cold water, which is to be added in small quantities, stirring the whole well together; the composition will then take a creamy or gelatinous appearance, and may be preserved in bottles well stopped. With this mixture the colours are to be used.

Many or most of the soft resinous gums may be mixed with water, by dissolving borax in boiling water in the following proportions, *viz.* to twelve parts water (by weight) add one part borax; into these, gums may be mixed, also bees' wax or oil, which when dry make a perfectly transparent vehicle, although, in the working, it possesses a most unpromising degree of opacity.

Different kinds of soap have been tried, but what effect time may produce on such vehicles the author cannot say, as the pictures he has seen in which these vehicles have

been used are of modern date. If a good vehicle can be had from tallow (the chief ingredient of most soaps), it probably will be obtained from that which has had the oil taken from it, as we have noticed in another place, and mixed with some of the varnishes which dry well.

White lac varnish, made with spirit of wine, although it refuses to mingle well with oil colours, yet may be wrought, by using the palette knife, into a mixture with the colours, so as to give them a freedom of working; and also the property of preserving the exact form given to them by the brush, or where the colours are wished to remain raised on the cloth, as in high lights, &c., the lac varnish will give this power as effectually as any of the vehicles now in use, and perhaps is the least injurious of all, as the spirit of wine entirely evaporates, leaving only in the colours a very small portion of the gum lac. The seed lac will be found best for this purpose. The varnish is made by mixing five ounces of finely powdered lac in two pints of rectified spirits of wine, and to be dissolved by a moderate heat.

We must finish this account of vehicles with an extract from Mrs. Calcot's very interesting "Essays towards the History of Painting." She observes: "Pliny enumerates many resins which were to be dissolved in oil before they could be used as liniments. They are such as flow from the terebinth, larch, lentisk, or mastic, and cypress, besides the pine or pitch trees. He also names many gums which might be dissolved in water, or wine, or vinegar, or a mixture of vinegar and wax. Some of these gums he occasionally names as useful to painters, and it is not unreasonable to conclude that those preparations of them

with oil, which would render them so peculiarly convenient as vehicles for colour, or varnishes for preserving pictures, were not overlooked. * * * In a subsequent passage, writing of vermilion and minium, and of the great luxury at which the Romans of his time had arrived in fine colours, he mentions that walls coloured with those expensive pigments were apt to blacken unless defended by a varnish of wax, for which he gives the following recipe: "Take white punic wax, melt it with oil, and while it is hot, wash the painting over with pencils, or fine brushes of bristles, dipped in the same varnish; when laid on it must be well rubbed and heated again with red-hot coals of gall-nuts, held close to it, till the wall may sweat and fry again; then rub it well with waxed cloths, and then with clean linen cloths." * * * "Moreover wax may be brought to all manner of colours, for painters, limners, and enamellers, and for a thousand purposes men have used thereof, but principally to preserve their walls and armours withal." (Holland's translation of Pliny, book xxi, c. 14.)

Of Grounds.—These are made in all possible ways, some of whiting and size, others with oil colours; the first are absorbent, the latter leave in the colours all the oil or other vehicles with which they may have been used. Both species of grounds have their admirers; perhaps a middle course, or semi-absorbent, may be better than either.

The only ground of which we shall mention the construction, is one for which the Society of Arts gave their honorary silver medal, and a premium of fifty guineas, to Mr. S. Grandi; it is called the Venetian ground, and

has met with much approbation from many eminent artists.

"Break grossly the bones of sheep's trotters, and boil them in water till cleared from their grease; then put them into a crucible and calcine—afterwards reduce them to a powder in a mortar. To some thin paste add an equal quantity of the bone powder, and grind the whole mass well together. This mixture forms the ground for the pannel. When the pannel has been well pumiced, some of the ground is to be rubbed on with a pumice stone, that it may be incorporated with the pannel. Another coat of the composition is next applied with a brush, when it is suffered to dry, the surface being afterwards rubbed over with sand-paper. A thin coat of the composition is then applied with a brush, and if a coloured ground be required, a coat or two must be added, so as to complete the absorbent ground. When a pannel thus prepared is required for use, it must be rubbed over with a coat of raw linseed or poppy oil, as drying oil will destroy the absorbent quality of the ground, and the artist's colours should also be ground very fine. The grounds thus prepared do not crack; they may be painted in a very short time after being laid, and from their absorbent quality, allow the business to be proceeded in with facility and better effect than with those prepared in the usual way."

If it be true that Titian had the cloths, on which he painted, well soaked at the back with bees' wax dissolved in oil to prevent their imbibing the moisture of the atmosphere of Venice, it is a proof of his sound judgment; but if we add to it another reason, and say that he also

did it to prevent his colours from falling through the ground into the cloth, and to support the ground itself on the surface of the cloth on which the picture had to be painted, we perhaps shall not be far from the truth, for on a cloth so prepared any kind of ground can be laid, and the ease and satisfaction of working on semi-absorbent grounds was not only well known to Titian, but to all those artists who had been in the practice of painting their dead colourings in distemper, or colours mixed in size, and afterwards of finishing them in oils.

ON COLOURS AND THEIR PROPERTIES.

Whites.

White Lead; an oxide of lead. Sometimes this is adulterated with common whiting, which spoils the colour for oil painting. White lead, under all its various names of Flake White, Nottingham White, sulphate of lead, &c., &c., stands well in oil or varnish; the heaviest are the best. These mix well with most colours, except the orpiments and yellows made from lead.

Zinc White has not so much body as white lead, but stands well in oil, and recommends itself by its perfectly harmless qualities with regard to health: it is an oxide of zinc.

Tin White, an excellent white for enamel painting; but does not dry well in oil, nor has it much body.

Pearl White, prepared from the mother-o'-pearl; excellent in water colours, but wants body in oils.

Barytic White, or *Constant White.* Where a white is required in oils for glazing, the Barytic White seems well suited, but has not much body; in water colours it deserves its name *(constant)*, and makes a beautiful clear white.

Flake White is a superior kind of white lead, and is

most in use as an oil colour; in water, all the oxides of lead become black.

Yellows.

Brown Ochre is a dark or brownish kind of Yellow Ochre, a colour that stands well both in oil and water colours.

Yellow Ochre is an earth found in several parts of England and elsewhere. This is sometimes called *Oxford Ochre*, being abundant in that neighbourhood. The colouring matter is derived from iron; it is a very useful colour, not inclined to change, unless sometimes particular qualities of it may become a little darker; we have also known it occasionally to fade a trifle, but it may generally be esteemed a permanent colour.

Roman Ochre would appear to be only another name for Brown Ochre.

Stone Ochre. This is an earth frequently found enclosed in stones, and is of different tints, from grey, through brown, up to yellow. It partakes entirely of the nature of other ochres.

Chrome Yellow "is a chromate of lead. Chrome is a metallic substance of a greyish white colour, extremely brittle, acidifiable with great difficulty by nitric acid, and then capable of combining with caustic potash into a Lemon Yellow. This salt being added to a solution of nitrate of lead, occasions a deep orange-coloured precipitate of chromated lead. Chrome is capable of furnishing some fine pigments to the painter and enameller, and it will tinge glass with a true Emerald Green; the colouring matter of this beautiful gem being proved to be this very

metallic oxide." (Rees' Cyclopædia.) The Chrome Yellow is generally made into several varieties of tint, some of them going into Orange; but we fear that the colours produced by chromates of lead must in time be classed among the changeable pigments: nor shall we lose much by abstaining from their use, as they are too gay for the usual class of colours employed, neither do they well assimilate with all, as Mr. Field is of opinion that they destroy both the Prussian and Antwerp Blues when mixed for greens.

Naples Yellow is in great use at the present day, although it does not appear to have been known to the artists of ancient times. This colour stands extremely well, but it must be carefully prepared without the contact of iron, which immediately changes its hue: therefore it may be presumed that the ochres which contain an oxide of iron, as well as other colours of a similar nature, will destroy the purity of Naples Yellow when mixed with them. This colour is a mixture of the oxides of antimony and lead.

Lemon Yellow, as described by Mr. Field, "is of a beautiful light vivid colour; in body and opacity it is nearly equal to Naples Yellow and Masticot, but much more pure and lucid in colour and tint, at the same time not liable to change by damp, sulphureous or impure air, nor by the action of light, nor by the steel palette knife, nor by mixture with white lead, or other pigments, either in water or in oil, in each of which vehicles it works well. Lemon Yellow is principally adapted to high lights in painting. In water it exceeds Gamboge in brightness, and in mixture therewith improves its beauty. This mixture

goes readily into oil; indeed it is the best and easiest way of rendering Gamboge diffusible as an oil colour; simple solution of Gamboge in a little water, and trituration of the Lemon Yellow therewith, being all that is requisite for this purpose." This Lemon Yellow has been produced by Mr. Field from platina, which has also afforded him another colour, called Platina Yellow, resembling Terra di Sienna, approaching Gallstones in richness and depth and can be produced of many tints:—he describes both these Yellows as working well and permanent both in oil and water colours.

King's Yellow, a sulphuret of arsenic, stands well in oil when not used with improper mixtures, particularly avoiding the oxides of lead. This is an exceedingly unpleasant colour in working, affecting the head by its highly poisonous qualities. The orpiments are all similarly composed, and have the same qualities.

Patent Yellow is a good working colour of a very bright tint, but of too fugitive a nature to be recommended; it is a cloruret of lead.

Masticot is a preparation of lead (an oxide), not always of the same tint, sometimes being found of a beautiful pale straw colour, at others of a pale grey or ashen colour; it is permanent when used by itself, but mixed with other colours it frequently is found too fugitive.

Turbith Mineral, a pale lemon colour, but so liable to changes that it must not be recommended; it is a sulphate or sub-sulphate of mercury.

Terra di Sienna is a most useful and valuable colour, either in water or in oils; its colour is a beautiful deep

transparent Yellow, derived from iron; it also has much body, and is permanent under all the usual influences, as sun, air, &c.

INDIAN YELLOW is supposed to be produced from the leaves of a tree called *memecylom tinctorium*, improved by the urine of the buffalo, Indian cow, or camel. It fades both in oil and water colours, but most so in the former: consequently has little value to the painter in oils.

YELLOW LAKE is a bright Yellow, of most beautiful tint for transparent painting in oils, as glazing Yellows or Greens on foregrounds; and it is to be regretted that so excellent a Yellow should be too fleeting to be valuable; notwithstanding, many use it in landscape with great effect.

ITALIAN PINK, *Dutch Pink*, &c. These are Yellows obtained from a vegetable dye, as infusion of French berries, &c.; with these infusions whitening and other substances are stained: such colours of course cannot be lasting. The Italian Pink is a rich colour, and like Yellow Lake, would be a valuable colour to the landscape painter in oils if more permanent (*see* CARMINE.)

REDS.

CARMINE. There are two distinct kinds of Carmine, the one made from cochineal, the other from madder. The first of these is a precipitate from the colouring matter of the cochineal insect, which is readily affected by the agency of alum, or the oxide of tin, as the cochineal, as well as all vegetable colours which are soluble in water, have an affinity for some earths and metallic oxides. These precipitates are called Lakes, and are of different

colours, chiefly Red and Yellow. A solution of alum, added to an infusion of madder, causes a mutual decomposition, and the colouring particles of the madder fall down in combination with a portion of the alum. The addition of an alkali assists the precipitation, but by too much of it the Reds are made of a purplish hue, and the Yellows become more brown or orange. Acids give to Reds more of the Scarlet, and to Yellows a paler colour. Quercitron bark makes, in this way, an excellent Yellow Lake; Turmeric is not sufficiently permanent. Broom-flowers make a very fine Yellow. Tincture of Anotto prepared with alum makes a bright Orange, or boiled with pearl-ashes and strained through paper. In short, all the Lakes are made from the watery solution of a colouring matter, combined either with alum or tin. The inferior Red Lakes are made from Brazil wood in this manner. The best common Red Lakes (excepting the madders) are made from refuse solutions, after Carmine, or a still brighter Lake colour, have been obtained, from shreds of scarlet cloth boiled in pearl-ashes, which extract the colour; these are then precipitated by a solution of alum. The richest deep-coloured Reds are obtained by using a small quantity of ammonia. Ammonia also, in solution with Carmine, gives the best Rose and Pink colours. The best Crimsons are also obtained from cochineal and madder.

LAKE *(see above,* CARMINE). All the Lakes are slow driers in oil, and not sufficiently permanent. From this censure the madder colours are to be excepted.

MADDER LAKES.—These are obtained of different hues and degrees of depth, from the richest Carmine tint to a

pale Rose colour. The madder colours are made by macerating the root of the madder plant in soft water, which is done by enclosing the root in a strong bag, and subjecting it to frequent pressure; the juice is to be boiled; afterwards add alum; then carbonate of potash, which will excite effervescence and precipitate a coloured Lake. In this manner a fourth part of an excellent Madder Lake will be gained from a given quantity of good Madder. A second process will give out an inferior Lake. The purpose of effervescing the extract is to get rid of the mucilage of the root. The Dutch Madders have generally been thought to have most of the colouring property in them; these Lakes of Madder are permanent, and are a valuable acquisition to our stock of colours, for, till they were discovered, we had no Lakes or Carmines that could be depended upon. They mix well with all other colours, and if any change has yet been perceptible, it is an improvement of tint. If these Lakes should be adulterated by the addition of cochineal, it may be discovered by testing them in liquid ammonia; this dissolves the cochineal, and leaves the madder untouched. In the same way, the Carmines and Lakes made from cochineal tested in ammonia will entirely dissolve, and whatever is spurious falls to the bottom untouched.

Scarlet Lake. A most beautiful colour, but not permanent in oil or water colours, suffering most from strong light. This is prepared from cochineal, with an addition of Vermilion, which decreases its permanency by a quality that Vermilion possesses in common with the preparations of lead, *viz.* that of destroying more quickly all the preparations from the cochineal insect.

VERMILION, in its crude state called *Cinnabar*. In many places a pure native Cinnabar is found, particularly in China and Peru. This is an excellent and permanent colour when pure; but with adulterations of Red lead, it cannot any longer be called Vermilion, and must change according to the quantity of the adulteration, and become black, &c. Vermilion has the property of entirely disappearing when tested by fire, but almost under every other circumstance will be found, both in oil and water colours, the most durable of all the colours we possess. The factitious Cinnabar has less of the crimson tint than the Chinese. Vermilion is a sulphuret of mercury.

IODINE SCARLET; a most powerful scarlet, but not to be trusted, being too fugacious and changeable. In tint it is almost too vivid for agreement with other colours, and the artist will do well to avoid it, until a more certain preparation can be made.

VENETIAN RED; a preparation from sulphate of iron. The best Venetian Reds possess a tint inclining more to the Indian Red than the light Red. Venetian Red is a valuable and permanent colour.

LIGHT RED is an excellent and very useful colour, both in water and oils; it is made by burning in an open fire the Brown or Yellow ochres. We prefer the latter, as having greater brightness and less inclination to the orange tint. This colour dries well, and is permanent.

INDIAN RED obtains its name from having been originally brought from the East Indies. It is a very serviceable colour, and stands well in oil or water colours. That which inclines to the rose tint is most esteemed. Indian

Red is an iron ore, and varies much in tint, but is easily obtained of excellent quality.

Rose Pink. Common whitening, stained with an infusion of Brazil wood; of no use or value to the artist.

Lac Lake is made from seed-lac, the nest of an insect (the *cocius lacca*), and is collected from the branches of trees and reeds in the East Indies. The colouring matter which it contains is of a deep and rich hue, and most probably was the lake used by the old masters. This colour stands much better than the Lakes obtained from cochineal.

Colcothar, a useful colour of a deep red tinge; it is a sulphate of iron.

Orange.

Burnt Terra di Sienna is a deep and transparent Orange, produced from the Raw Sienna burned; it is permanent, mixes well with other colours, and a good drier.

Spanish Ochre, or *Orange Ochre*, is produced from the best Yellow Ochre burned in an open fire; dries well and is permanent.

Jaune de Mars, a colour of the same nature as the above, being an iron ochre.

Orange Vermilion is a new colour made from Mercury, not unlike Red Lead, but of a warmer colour; works well in oil, has great body, is permanent, and a good drier. We have no other orange possessing so many good qualities, or so powerful a tint.

Damonico has the colour and properties of burnt Roman

Ochre and Terra di Sienna. This is a colour not subject to change, and works well with others.

Browns.

Brown Pink is a beautiful glazing colour in oils, but does not stand well; perhaps it belongs more to the class of Greens than Browns, although from its name we give it a place here; it is made from the decoction of French berries, &c., and precipitated in the usual way with other vegetable Lakes. It is not a good drier, and appears to be of more value as a water colour than in oils. Brown Pink has so little body that it cannot be used where substantial painting is required; mixtures with white destroy it, therefore when an alteration has to be made in this colour by mixture, perhaps Terra Verte will be found the best for heightening and giving body to it, and Burnt Umber may be used to make it deeper in tone.

Burnt Umber is a rich deep brown, made by burning the Raw Umber; it dries well and is permanent.

Raw Umber. A cool yellowish brown, one of the ochres, a good drier and permanent. It makes a most useful colour either in oils or water, but perhaps is more generally used in the latter vehicle than the former. This earth is found in many parts of England and Wales, amongst the lead and coal mines.

Vandyke Brown. A colour in great use and estimation. It is found everywhere in the neighbourhood of bogs, being a species of bog earth. The finest specimens the author has seen of this colour have been found imbedded in stones, but in quantities too small to be

useful. This colour requires an addition of drier, or a strong drying oil; it stands well, and must be considered as one of our most valuable browns. There are many other browns, differing more in name than quality, as *Castile Earth*, or more properly *Cassel Earth*, &c. These earths are found, like Vandyke Brown, in England and elsewhere, and possess nearly all the qualities of Vandyke Brown; the small difference that exists is in favour of the latter as a glazing colour, and of the former for body.

Rubens' Brown, an excellent colour in working, rather more opaque than Vandyke Brown, and of a yellower tint, and is equally permanent.

Bitumen, or *Asphaltum*. This is used with spirit of turpentine as a glazing colour. The colour is a beautiful brown: but it cannot be recommended, on account of the tendency it has to crack, particularly when freely used for great force as a glazing or toning colour. It is a mineral pitch, found in various places, but chiefly in Persia and on the borders of the Dead Sea.

Mummy is found in the tombs of Egypt, and must be considered as the debris of the embalmed bodies: consequently containing bitumen in combination with animal matter. It is something similar to asphaltum, but of more body, and stands better as a colour, nor does it crack: of course it is preferable.

Madder Brown. Made from the madder root, of several tints, inclining to orange or sometimes purple. These browns do not dry so well in oils as could be wished, but for oils the darkest of them, called Intense Brown, is the most useful. They are like other preparations from madder, all permanent. An interesting account

of the culture and preparation of the madder plant (*Rubia Tinctoria*) is to be found in the original editions of "Miller's Gardener's Dictionary," and as the Dutch madders have always been considered the best, he gives their method of cultivation, which perhaps has not been improved upon since his day.

Cologne Earth contains, notwithstanding its name, much of vegetable remains. It has something of the taste of oak-bark, and appears to be the produce of wood that has laid long in the earth. It is found in England, at the Mendip hills and other places, but the German is to be preferred. This colour has most of the properties of Vandyke Brown. The snuff-makers on the Continent use much more of this substance for colouring and adulterating their snuffs than is consumed by artists, although as a colour it has always been in estimation.

Bone Brown. This and a similar colour made from ivory chips, are not in such general use as the Blacks made by burning the same substances; the difference consists in not carrying the charring process so far for the brown tints as the Blacks. Neither the ivory blacks or browns, or those produced from bones, dry well, but they are permanent.

In Mr. Field's work on colours we find one mentioned, called *Manganese Brown*, described as perfectly durable in oils and water-colours, of a deep tint and good body. Also a Brown Lake, obtained from *Horse Chestnuts*, which is stated to be permanent, both in oil and water-colours, and of a warmer tint than Brown Pink.

Greens.

Terra Verte is a hard clay, found in Cyprus, France,

and many other places. The best is found in the neighbourhood of Verona; it has been obtained nearly of equal value in the Mendip hills. This is an excellent colour, and seems to have been much used by the old masters. It forms a Brown by burning.

Emerald Green, a brilliant colour, more useful in water than in oils; and in the former it can only be used as a body-colour, possessing no transparency. This is a factitious substance; the colouring property is obtained from copper.

There are other Greens, as *Cobalt Green*, *Chrome Green*, *Scheel's Green*, *Prussian Green*, *Schwein Green*, &c., &c.; but the artist will find it much better to compound his green tint from the various yellows, browns, and blues, than to encumber his palette with too many colours, especially as they are seldom of the tint that he wants, without an admixture; and in most cases the whole colour is as readily compounded as the admixture.

Blues.

Ultramarine is obtained from the lapis lazuli, a marble of a mixed nature, veined with gold, bearing a high polish, but of not much lustre; the colour is given by a blue sulphuret of iron. According to Klaproth, it is composed of 46 silica, 14·5 of alumina, 28 of carbonate of lime, 6·5 of lime, 3 of oxide of iron, and 2 of water. The stone is heated and then suddenly quenched in water; this renders it friable, and it is then easily ground or crushed into an impalpable powder, from which by a variety of workings with water the valuable colour is gained, which is one of the best we have, having the

double property of being a good glazing and body-colour of much substance. Few colours stand so well, and could it be had at a moderate price, perhaps it would supersede, the use of all other blues. It is not always of the same tint, varying from the green to the purple hues, but in so small a measure that considerable judgment is requisite to perceive these gradations in the best colour. One of the best tests for Ultramarine is acid, which perfectly destroys the colour if good.

Ultramarine Ashes. An inferior quality of Ultramarine, of a pale greyish blue tint, useful as far as its power can be carried. Professor Gmelin has described, in the 37th volume of the *Annales de Chimie et de Physique*, a method of making a very good imitation of Ultramarine, the basis of which is composed of silex, alumine, and soda, coloured by a sulphuret of sodium.

Cobalt Blue. A most beautiful colour when perfect, but not quite so permanent as Ultramarine; it works well in water and oils, and also dries well in the latter.

Smalt. This is produced from an intensely blue glass, made of calcined cobalt, combined with a vitrifiable flux; this is poured hot into cold water, which breaks it in every direction, and afterwards is reduced by grinding into a fine powder. This makes a fine deep-toned blue, in both oil and water.

Royal Blue. A superior kind of Smalt. All the preparations of Smalt stand better in water than in oils.

Prussian Blue, is a combination of the Prussic acid with iron; a powerful colour, mixing well with others, but does not possess the permanency of Ultramarine,

generally becoming much darker, both in oil and water-colours. It is a very slow drier in oils.

ANTWERP BLUE is a better colour than the above; brighter, and less liable to change, having an earthy base.

BLUE VERDITER. A mineral blue, made of the *Lapis Armenius*, found in the mountains of Hungary. This is a cool blue, but without transparency, and liable to get a greenish hue both in oils and water. The Verditer Blue now in use is a factitious preparation of chalk, coloured by copper, and is of no value.

PURPLE.

MADDER PURPLE, or *Field's Purple*, is described in his "Chromatography" as a "deep and rich Carmine; its richness, durability, transparency, and superiority of colour, have given it the preference to the purple of gold. (This latter is a rich and powerful colour of great durability, varying in hue from a deep crimson to a murrey, or dark purple, an excellent although expensive colour; it is a compound oxide, precipitated by mixing the solutions of gold and tin.) The Madder Purple dries well; it is pure and permanent in its tints. It neither gives nor sustains injury from other colours, and is a very eligible pigment."

BURNT CARMINE. This should be classed amongst the *Browns*, as one of the most intense; it is simply what its name denotes, and may be obtained by burning either the carmine of madder, or cochineal, on a small saucer in the open fire; or if a deeper tint be required, by charring it

in a small and well-closed crucible. To the experimentalist this method of treating colours will give a novel list, by changing their hues, without in the least destroying their permanency, and in almost all cases where the unburnt colour does not readily dry in oils, it will be found that the charring, or burning in an open fire, will give to them this very desirable quality.

If the student or artist should wish for a more extensive list of colours, we must refer him to the "Chromatography," an excellent and interesting work by Mr. Field, which we recommend to the notice of our readers; but he will find in the above list a much greater number than he can well use, for on most occasions we may say that the palette of few colours will make a more harmonious and a better picture, than one in which a larger number is employed.

Blacks.

Ivory Black and Bone Black are prepared in the same way, *viz.* by charring in a crucible. The former is generally much adulterated with the latter. The chips of ivory should be well soaked in linseed oil previous to burning. Both these colours are permanent, but bad driers. The Ivory Black is the most useful we have in this division of colours.

Blue Black and Frankfort Black are made from wood, shells of stone-fruit, shells of walnuts, &c. The best is obtained from vine stalks, charred in luted (or closed) vessels, where the air is well excluded. The black from walnut-shells is of a greyish colour, and not of much body. Cork has also been tried in the same manner, and

makes a colour very similar to that of other vegetable matters; this has the name of Spanish Black.

Lamp Black is an intensely deep black, obtained from various oily substances by burning, as turpentine, tar, and every kind of resinous matter, the smoke of which, collected, makes the colour, without any other preparation; this black dries badly in oil. A purple black is mentioned by Field as a colour of good body, and one that dries well; this is made from the madder plant.

ON THE VARIOUS KINDS OF BRUSHES, GRINDING COLOURS, &c. &c.

THE preparation of oil colours is so well managed by those who make it their entire business, that no amateur or artist can enter into competition with them to his own advantage; but as both may be thrown into positions where the facilities afforded by London and other great towns are not immediately available, it may not be unacceptable to have a few hints on the manner in which oil colours are prepared.

When colours are to be ground in quantity, a large porphyry stone will be necessary, with a muller of the same material; but for small quantities we recommend a slab of ground glass, fixed on a strong deal board, with edges of wood, not so high as the surface of the glass, but sufficiently high to prevent the glass from moving off the board; with this a muller of ground glass is to be used. The ground glass slab is an indispensable article to every one painting in oil, as the colours and tints have to be tempered and mixed on it before they are transferred to the palette; no tints of any breadth, as skies, &c. for large pictures, flesh tints for portraits, backgrounds, and others, ever being mixed on the palette or by the brush with equal purity.

When crude colour has to be mixed or ground, it must

first be crushed into a coarse powder, adding a little of the oil to it (nut or other drying oils), and with the muller the colour is then to be crushed into a thick paste, remembering, that the less oil that conveniently can be used, the more readily will the colour be ground fine, and as the colour becomes finer, it will require frequent additions of small quantities of oil; and during the whole process, the colour, which is constantly gathering round the edges of the muller, must be removed with the spatula, or palette knife, and again placed under the muller; the knife should be of horn for all the finer colours.

In manufactories where they are ground in large quantities, a stone is kept for almost every colour; but the amateur or artist, who will be at the trouble to prepare his own colours, must also have the additional trouble of cleaning the slab on which they are ground, and that most carefully, every time a fresh colour has to be placed on it. This will be best done by rubbing a little oil over the stone or slab, which may be scraped up with the knife, or rubbed off with a handful of the thin leather shavings called currier's shavings, or cloth of any kind, and lastly, with a sponge, soap, and warm water. We must not omit to recommend a wooden cover for the slab when out of use. Some colours require so much crushing and grinding before they are sufficiently fine for use, that the oils in which they are ground become in some degree viscous, or tough, or in technical language, fat. To avoid this, it would be best to keep all the crude colours in powder; they are sold at most colour shops in this state, and are, as nearly as possible, impalpable. This condition is obtained by grinding them in water, and saves so much

time and labour, besides obviating the fatty tendency of grinding, that it needs no recommendation, and for the finer colours, perhaps, is to be preferred, where there is an intelligent servant to superintend the painting-room, as all colours are undoubtedly the best, and work with greater freedom, which have been most recently prepared.

Another important consideration in the use of oil colours (and more so in oils than in water-colours, on account of the trouble in cleaning the brushes, is the necessity of keeping a brush for the different tints, as in nature the colours and hues are so perfect, so distinct, and clear, that when we have done all that colours can do in painting, we are left far behind. Thus every means are to be employed which we can have at command, to preserve our colours or tints from contamination, by mingling with others; and this, as far as the brushes are concerned, can only be done by using separate brushes for tints and colours that essentially differ from each other. For example, if we are using a brush with a tint composed of Venetian Red, Black, and White, this brush cannot be soiled by any admixture of these three colours; but the addition of another colour would destroy the power of again using that brush for those delicate tints which are often produced by the above mixture; or if we are using tints made of Venetian Red and White, any other tint or colour added will prevent the same brush from being again properly used in the tints of Venetian Red and White. From the above it will be seen, that a good stock of brushes must be at hand for those who paint in oil, and these, when used, must be carefully cleaned with a little raw linseed oil in the first instance, and the oil afterwards

washed out with soap and water, till the froth, which is made on the palm of the hand, becomes perfectly colourless; the brush is then to be rinsed in clean water, and the wet pressed out of it by a clean cloth or towel, restoring the brush to its proper shape at the same time. Great care is to be used when cleaning brushes, not to break the hairs, as it renders them useless.

Many artists have a tin purposely made to hold brushes which have been used—in this, after being dipped in raw linseed oil, they are left with some of the colour remaining in them, till again wanted. This mode may do for large brushes that have to be employed in the dull colours of some kinds of backgrounds, but the trouble of getting rid of the raw oil, which would prevent colours from drying if not well cleaned out, is not much less than the trouble of washing the brush; and none can know the pleasure of having a perfectly clean set of brushes to commence with, but those who have had much occasion to use them.

When the brushes are left in a tin with the raw oil, they are to be well washed in spirits of turpentine before they can be used; but from long experience we recommend the better system of washing, a method which a servant will acquire on seeing one set of brushes properly washed and dried.

When varnishes or other strong vehicles have been used, the brushes must have the colours taken out by spirits of turpentine in the first instance, then apply the raw oil, and lastly the soap and water; but when copal varnish has been employed, it will sometimes become so hard that spirits of turpentine will not soften the brush

sufficiently—in this case the essential oil of spike lavender is the readiest, after which, the spirits of turpentine, &c. Sometimes the oil of spike lavender is used with the colours in place of spirits of turpentine; but few heads are strong enough to bear the extraordinary scent it produces, especially in hot weather, or a heated room.

Whenever it happens that camels' hair brushes have to be used with the stronger vehicles, the process of cleaning so far injures them, that it will perhaps be least expensive, and certainly less troublesome, to throw them out altogether, for a very small quantity of the essential oil of spike lavender is worth much more than a camels' hair brush, particularly when the latter are purchased by the gross, or twelve dozens.

Among the different kinds of brushes in general use, the hogs' hair make the firmest, and are suitable for dead colouring, or for spreading any large quantity of stiff colour: these are made round and flat; perhaps the latter shape may be named as most useful, for a corner of the brush will at all times adapt itself to the execution of the smaller touches. These brushes are used as well in the beginning as towards the completion of a large picture, when, instead of firm undiluted colours, they are used with varnish or other vehicles, in order to glaze and tone down the brightness of those colours that have been laid in for this purpose, or which may be accidentally too gay or vivid.

For small pictures of the highly finished class, camels' hair brushes, or sables, will be best, especially after the first or dead colouring. The first painting of small pictures may often be laid in advantageously with the

smaller and finer kind of hogs' hair brushes, called Lyons tools, from the name of the place where first made; they may be had of almost every degree of softness or hardness; these are much superior to another kind of brush called the Fitch, the hair of which is usually black, and very strong. This has gone much out of fashion since the French improved hogs' hair brushes have been known: in short, the fitch is almost too intractable for use. The last we shall mention is made of badger's hair, called a softener, and used for blending and softening neighbouring tints with each other whilst wet; in skies and water, this brush (which should have long hair), by being passed gently in every direction over the work, will give certain appearances of transparency that nothing else can imitate. It also takes away the mark of the brush, so offensive when seen in a clear sky; there are few places, indeed, where it is desirable that the mark of the brush should be seen.

For landscape, marine pieces, and backgrounds, the first painting may in some measure be done with a palette-knife, and awkward as the utensil may seem, a little practice will show that a large picture, where the subject will permit, may be laid in (as it is technically called) with a flexible pallet-knife of horn or steel, or any other pliant spatula, in much less time than with a brush, and in a bolder style, as well as greater purity of tints, which invariably work cleaner from the horn or tortoise-shell palette-knife than in any other way.

LITHOGRAPHY.

A MANUAL OF LITHOGRAPHIC DRAWING AND PRINTING.

LITHOGRAPHY is the art of drawing and writing on stones of a certain quality; the process being dependant entirely on the power of absorption possessed by the stone for grease, or greasy substances, and also water, as well as the natural repugnance which grease and water have for each other. The stone having received a fine surface, a drawing is made with greasy chalk on it, the stone is then made wet, and printing ink passed over it, which adheres only to the chalk, and this yields an impression to the paper when pressed closely upon the stone.

The stones used in lithography are calcareous, imbibing well both grease and moisture. The best are found in Bavaria, abounding in the district between Dietfurt and Pappenheim, and along the Danube down to Kehlheim, from which latter town it takes the name in Germany of Kehlheim stone, though the quarries at that place are said to be exhausted, so that at present the chief supply is from Solenhofen near Pappenheim.

In France, stones have been found near Chateauroux, in the department of L'Indre, of a hard, fine grain, but, unfortunately, so full of spots of a softer nature than the rest of the stone, that it is difficult to procure one of a tolerable size. In England there is stone found at Corston, about four miles from Bath, very similar to the Bavarian, but of much too coarse a texture, and is only fit for transfers, or rough ink drawings or writing. Indeed we rely entirely on Bavaria for our supply of stones sufficiently fine in texture to admit of the more finished chalk-drawings being executed upon them.

The thickness of the stone, even of the smallest, should never be less than an inch and a quarter, and should increase with the size. Two inches and a half, or three inches, at the most, will, however, be sufficiently thick for the largest.

The stones, when cut to the proper size by the mason's saw, are levelled by rubbing the faces of two together with water and silver sand between them till perfectly even, which will be seen by applying a straight-edged ruler to their surfaces from time to time. When perfectly level, the following is the method of preparing them for chalk drawings:—Two stones are placed face to face, with silver sand and water between them, the sand being first carefully sifted to take out any larger particles, which would otherwise scratch the surface. The upper stone is then moved in small circles over the lower one till both are perfectly and evenly grained. When they are washed, and common yellow sand being now used instead of the silver sand, the operation is repeated till the grain is sufficiently fine. The stones are then washed clean, and wiped dry with clean

linen cloths, and it is to be noticed that the upper one will always be found of a finer grain than the lower one.

When stones are intended for ink drawings, the same method is pursued, and when as smooth as the yellow sand can make them, finely powdered pumice-stone is to be used. The stones are then washed, and the last degree of polish is given to them by rubbing them with a very fine piece of pumice stone, or water-of-Ayr stone.

To clean a drawing off a stone, it must be rubbed (another stone being placed over it) with silver sand, till every mark disappears, and then washed with aquafortis and water (one part acid to twenty parts of water), in order to destroy all remains of the former drawing, which might reappear in the course of printing. It is afterwards prepared for a new drawing as described above.

Besides the STONES and the PRINTING PRESS, which we shall describe hereafter, the materials required in lithography are PORTCRAYONS, SCRAPERS, STEEL PENS, BRUSHES, TRACING PAPER, TRANSFER PAPER, LITHOGRAPHIC INK, LITHOGRAPHIC CHALK, PRINTING INK, the PRINTING ROLLER, and a SMALL POCKET KNIFE sharpened in a peculiar manner, to be described farther on, and to be used only for cutting the chalk to a fine point.

The PORTCRAYONS used in lithography should be the lightest that can be procured, and in doing the flat tint of a delicate sky, a strong quill split, with a ring slipped over it to hold the chalk more firmly, is to be preferred on account of its extreme lightness.

SCRAPERS should be made of a narrow piece of steel, from a quarter to half an inch broad, set in a handle, and ground to an angular point. The Mezzotinto Scrapers

are an excellent substitute, and, when once well set, preserve their edges a long time; these can be had of the Messrs. Ackermann, in the Strand, and in Regent Street.

Steel Pens, for ruling straight lines, are the same as those found in every case of drawing instruments, with the exception that the sides are wider apart, so that the points meet at a greater angle, by which means the lithographic ink, which is naturally much less fluid than Indian or common ink, flows with greater facility. For other kinds of work, the best steel pens, such as are used for writing, are employed. These pens are generally fixed in a quill.

The Brushes should be very small and short haired; red sables, of which all the hairs, except fifteen or twenty in the centre, ought to be cut off near the quill; a very large soft camel's hair brush, or a soft feather, is useful to sweep away the particles of lithographic chalk which fall on the stone whilst working.

Tracing Paper is made by rubbing very thin and highly hotpressed letter paper, or glazed tissue paper, all over with a piece of cotton wool dipped into a mixture of equal parts of spirits of turpentine and drying oil; the paper must be hung to dry for a day or two before it is used. The red tracing paper (which is placed between the tracing and the stone) is made of glazed tissue paper, or very thin writing paper, rubbed over with dry vermilion, or any other red colour, reduced to an impalpable powder.

The difficulty of writing backwards led to the invention of Transfer Paper, which is made in the following manner:—

Dissolve half an ounce of gum tragacanth in water; strain it, and add one ounce of glue and half an ounce of gamboge. Then take of

French Chalk	4 ounces,
Old Plaster of Paris	½ an ounce,
Starch	1 ounce.

Powder and sift these through a fine sieve; grind them with the gum tragacanth, glue, and gamboge, add sufficient water to give it the consistence of oil, apply it with a brush to thin sized paper.

LITHOGRAPHIC INK is made of

Tallow	2 ounces,
Virgin, or White Wax	2 ounces,
Shell Lac	2 ounces,
Common Soap	2 ounces,
Lamp Black	¼ of an ounce.

Procure an iron saucepan with a lid which shuts very close, heat the wax and tallow in it till they take fire, then throw in the soap (previously cut into small pieces), one piece at a time, waiting till one is melted before another is added. When all the soap is melted, let the mixture burn till the whole is reduced one-third in bulk; add the shell lac, and when this is melted extinguish the flame; which will probably often have to be done during the operation to prevent the ingredients from boiling over.

If after this operation any of the parts remain undissolved, the ingredients must be heated again till all are melted, but without being again ignited; and in order to see that the process has been properly performed, a little must be poured out on to a plate.

If when cold it feels like wax on being worked between

the fingers, it is not burnt enough, and must be once more burned as before.

If when broken, the pieces will not adhere to each other on being pressed together; add a little more soap and burn it till the soap is dissolved. The lamp black may now be added, by melting the whole over a slow fire, and stirring it in till intimately mixed. The ink is now made, and when not too hot must be poured out on to a marble slab, and as it begins to cool must have another slab laid upon it, to make it compact. When cold, it may be cut into pieces of a convenient size, but before the ink is poured out of the saucepan, both slabs are to be well rubbed with soap.

As in making lithographic ink failures will frequently happen, it is to be remembered, that when the ink does not dissolve easily, it requires more soap; when it is soft, and sticks too much to the fingers, it has not been sufficiently burned; when the ink has no tenacity, it is too much burnt; when after being dissolved in water it becomes slimy, it again requires to be burnt.

This ink is for writing with a pen, or drawing with a brush, on the stone. The ink for transfers should have a little more wax in it.

LITHOGRAPHIC CHALK is composed of—

Common Soap	1½ ounce,
Tallow	2 ounces,
Virgin, or White Wax	2½ ounces,
Shell Lac	1 ounce,
Lamp Black	½ of an ounce.

The whole process for making the chalk is precisely the same as used in preparing the lithographic ink, but the

burning must be stopped as soon as the chalk, when quite cold, breaks sharp and clean. If when cold it is too soft, it must be burnt again; if too brittle, more wax must be added.

Lithographic chalk requires to be cast in a mould, with a very heavy pressure to prevent its having air bubbles; but if a mould cannot be procured, it may be poured into a paper bag, the inside of which has been rubbed with soap, and inclosed in a linen cloth, and then submitted to a heavy pressure till nearly cold, when it may be taken out and cut with a knife into pieces of a convenient size.

Lithographic chalk should always be kept in a bottle, and in a dry place, as it is spoiled by the least damp, and the chalk to be used in summer should be of a more brittle texture than that used in winter. Many practitioners in lithography make their own chalk, and of various qualities, by varying a little the proportions of the ingredients. These different chalks will give different appearances in the print when finished, and by these several qualities of the chalk, a richer and more varied style can be got, as certain kinds of chalk will better suit for the representation of some things than others.

The KNIFE used for cutting the chalk to a point is an important instrument in lithography, and we give the description of it in the words of its inventor, Mr. Howlett. "It is sometimes difficult to bring the crayon to a fine point with a common penknife, for if the edge of this latter is set to the shape of a very fine wedge, it will slip through the crayon, as, on the other hand, a blunt wedge will break off the point before it has cut it sufficiently

fine; but if the knife is set chisel-shaped, the oblique surface being applied next to the crayon, shavings of extreme tenuity may be taken off, and a very fine point will be the result."

PRINTING INK "is composed, as other printing-inks are, of oil-varnish and very fine lamp-black well mixed together. To prepare the varnish, as it is called, a saucepan is about half filled with pure linseed oil, and heated over a fire till it ignites from the flame of a piece of burning paper. It then must be allowed to burn till it be reduced to the degree required; and if during the operation there appears danger of its boiling over, it must immediately be taken off the fire, and the cover, which should fit quite close, put on to extinguish the flame. The operator cannot be too much cautioned against the danger attendant on the burning process in a room with a boarded floor, or, indeed in any part of a house.

"Several inks must be prepared, differing in the degree of viscidity or thickness of the varnish from which they are made, and the quantity of black mixed with them. The longer the oil is burned, the thicker the varnish becomes. The thinnest varnish is burned till it has lost nearly one-fourth of its quantity, the next till it is reduced one-third, and the thickest till it is reduced one-half.

"These directions are to be considered as very general ones, and the state of the varnish is best judged during the burning by taking out some with a spoon, and letting a drop fall on a cold earthen plate, and trying its degree of viscidity with the finger. The thinnest sort should be like common honey, and the other should draw out in strings,

which will be longer as the varnish is thicker. The thickest will draw out in strings two or three feet in length.

"It is quite essential to have the oil pure, the saucepan perfectly clean, and to keep the varnish in clean and close earthen jars, in a cool place. That varnish which has been most recently made will always be found the best, therefore it is not well to make more than may be required for a moderate length of time. In London, and many other places, this varnish and the printing-ink, ready made, can be purchased, of any required quality, but when a lithographic establishment has to be created in places where these and other suitable matters cannot be purchased, the above and following directions will be found of value. The quality of the printing-ink is of great consequence, as the good appearance of the print depends very greatly on it; where the ink is wrong, the drawing on the stone will be entirely spoiled by it.

"The black is mixed with the varnish on a grinding stone with a muller, in small successive quantities, care being taken that the first portion of black is equally mixed with the varnish before the next be added. In the thickest inks this requires considerable labour. By mixing the varnishes together, any degree of stiffness in the ink may be obtained, and by putting more or less black its thickness is regulated. The printer must always have by him several small pots, each containing a different printing-ink, to be used as occasion requires. A small quantity, not more than a hazle-nut, should be used at a time; for it is desirable to charge the roller with as small a quantity as possible, and it must be worked well on the colour tables

in all directions, that it may be equally distributed all over the roller. Ink-drawings are generally printed with a stiffer ink than chalk-drawings."—*Ency. Brit.*

The printing roller is turned out of alder or lime tree, of any length required, but it should never be less than four inches and a half or five inches in diameter. It is made with a wooden handle at each end, to hold it by. The roller must be first covered with flannel, rolled round it three or four times, stretched very tight, and fastened with nails at the ends, and then covered with calf-skin. To do this, the skin must be well soaked in water, and then stretched and fastened down on a board with nails to dry; it must then be cut to the exact size of the circumference of the roller, and the seam sewed with what is called the closing stitch, taking care that the skin has the smooth side outwards; when done, the skin is turned with the rough side out, and drawn over the roller, and the extremities, which are purposely made longer than the roller, must be nailed on to the ends.

Two hollow handles are made to fit on to the wooden handles of the roller, and by the former being pushed more or less on to the latter, the roller is made to turn with greater or less facility. These hollow handles are made of stout leather, but when the drawing is done in ink, the highly-polished surface of the stone prevents the roller from turning so easily as on one prepared for chalk, and wooden handles are substituted.

A new printing roller is prepared for receiving the ink by warming it near the fire, and rubbing it with hog's lard; this must be scraped off, and the roller worked for a day or two on the colour-table with printing-ink, when it will

be ready for use. After a roller has been laid by for some time it is no longer fit for use, till the dry ink has been carefully scraped off, after which it must be rubbed with hog's lard before the fire, and then charged with ink as before.

As in the execution of lithographic drawings the stone has to be turned in different positions, to facilitate the drawing of certain lines according to their different directions, an operation which when the stone is large becomes somewhat difficult, a number of ingenious contrivances have been invented to obviate this difficulty. Some tables are made with a circular moveable centre, on which the stone being placed, it may be turned in any direction at pleasure. This is an excellent plan; but when such a table is not to be had, a very simple contrivance will enable the draughtsman to do very nearly as well without. This is merely fixing with gum, or glue, or sealing-wax, a piece cut off a bottle cork, about the eighth of an inch thick, so near the centre at the back of the stone that it may just incline with the foreground towards the person who is working upon it, if for a landscape; but if for a map or military drawing, it is better that the stone should be exactly balanced on the cork. This method allows the stone to be turned with extreme facility, which, in military drawing especially, is of some consequence.

The great readiness with which the stone absorbs the insensible perspiration of the hand even in a momentary touch, and when the hand is scarcely warm, makes it necessary that means should be taken to protect it. For this purpose, some rest their hand upon a silk handkerchief, carefully folded; but the nature of lithographic chalk is

such, that the slightest rub would confuse, or entirely spoil the lines—of course we cannot recommend it; a better method, and one most generally pursued, is to procure several pieces of deal, half an inch broad, and a quarter of an inch thick, very straight, planed perfectly smooth, and of different lengths, to suit different sized stones; four of these, *viz.* two for the sides and two for the ends, are to be fastened with gum on the surface of the stone, so near the edge that they may not interfere with the work. On these is placed a board half an inch thick, and from three to eight or nine inches broad, according to the size of the stone, and long enough to reach from one side to the other; this also is to be planed perfectly smooth, and the end on which the hand rests should be bevilled off very thin, to allow the hand and the pencil, pen, or portcrayon, to come nearer the stone; this we have found the most convenient arrangement, either for etching on copper, or steel, or drawing on stone.

Many make use of a box a little larger than the stone, and from a quarter to half an inch deeper than its thickness: the edges of the box, which rise above the surface, render the pieces of deal unnecessary, as the board for the hand rests upon them; and there is an advantage in this contrivance, as the pieces of broken chalk are contained in the box, and thus prevented from falling on to the floor, for nothing so rapidly soils a floor of any description as the chips and cuttings of lithographic chalk. The objection, that the varying thickness of the stones might cause the sides of the box sometimes to raise the hand-board too far from the work, is easily removed, by placing something beneath the stone, as books, &c., till sufficiently elevated for the hand.

But whatever the plan pursued may be with regard to a rest for the hand, we strongly recommend, for the sake of neatness, a table with an edge raised about an inch, to prevent the cuttings of the chalk from falling on the floor, also in order to save them for remelting for future works, as these cuttings will be considerable when much lithographic work is done.

Whilst making lithographic drawings, the greatest care is to be taken that no saliva, or other moisture, falls upon the stone, as it would prevent the chalk from adhering, and so make a white spot. The breath also must not be allowed to touch it, as wherever the stone is damp, neither the chalk nor the ink will take effect; and, before commencing a drawing, it is always necessary to wipe the dust off the stone with a soft dry silk handkerchief, or brush it off with a soft feather; the feather should also be used every morning on recommencing operations, as, however close the stone may be covered, some dust is almost certain to penetrate, and for the chalk-drawings on stone too much care cannot be taken.

Ere we proceed to describe the process of transferring the tracing of the subject to be drawn on to the stone, it may be well to speak of the method of reducing or enlarging. This is of great use in military drawing, as well as landscape or figures, and is done in the following manner. Divide the length of each side of the drawing to be copied into a certain number of equal parts (say sixteen), which mark with a pencil along the edges, then with a pair of compasses opened to the same distance, that is, one-sixteenth of the length, beginning at the bottom, mark off the same divisions along each end, as many as

the breadth of the drawing will contain; but, as it rarely happens that the same measure, which divides the length into equal parts, will also equally divide the breadth, there is almost always a remainder, or fraction of a square, which, by commencing at the bottom, is thus brought to the top of the sky, the part in general that can most easily bear the inaccuracy, if any should be made, in the copy or reduced drawing. Draw faint lines with a soft black-lead pencil from the different points, and the drawing to be copied will thus be divided into a certain number of squares.

Whether the copy of the drawing has to be made smaller or larger than the original, or of the same size, take the length you intend it to be, and divide it into the same number of equal parts as the original both ways, as described above, and having ruled faint pencil lines, so as to divide the paper into the same number of squares as the original, you may begin the copy, previously having numbered the squares in each with corresponding numbers. The commencement may be made anywhere, taking care to place exactly in the squares of the copy that which is found in the corresponding squares of the original, remembering also, that the greater the accuracy required, *or the less the skill of the copyist*, the greater must be the number of squares into which the drawings are to be divided. The same method is followed in copying all kinds of subjects, and will be found equally accurate for figures, animals, landscapes, military drawings, or maps.

It will frequently happen that the original drawing will be too valuable to allow pencil lines to be drawn across it; in this case fasten it to a board, and divide it by means of a

thread, either passing it entirely round the board, or round small nails driven into the board opposite each point of the divisions, which we must suppose to have been marked along the ends and sides of the drawing.

The reduction finished, trace it on to the tracing paper, either with an H.B. pencil, or pen and Indian ink; common ink would be sufficient with a little gall added to make it take on the tracing paper. Then fix it on the stone by gumming the upper edge, taking care to reverse it, and to introduce the intermediate red tracing paper, and with an ivory point, very fine, but so rounded off as not to cut the tracing, go over every line of the drawing with a steady pressure of the hand, by which it will be transferred to the stone in red; or, should the tracing be on thick paper, make the tracing in ink, and when dry rub it over with vermilion in powder; by this method you do away with the necessity of an intermediate red paper.

When an original subject is to be executed, it may be drawn on the stone at once, either with red chalk, or with a B.B. pencil; we however, recommend the former, for when the pencil is used, the similarity of colour occasions frequent doubt as to which is lithographic chalk or which is black lead, so that parts where the pencil has been are frequently left untouched by the chalk through this mistake.

Before the draughtsman begins the work, he must provide at least one dozen of light portcrayons filled with chalk at both ends; these are to be cut to a fine point: this from the fragile nature of the material is rather a difficult operation, nor is it easy to explain how it is to be done; but, contrary to the black-lead pencil, we com-

mence cutting from the point, and not towards it, using a penknife set with a bevilled edge (chisel-fashion), as we have already described.

Though drawing on stone with lithographic chalk is perfectly easy to every one accustomed to the use of the black-lead pencil, there is a certain difference in the touch, which can only be understood by frequent trials. The faintest lines in lithography must be done with a firmness of touch which is not at all necessary on paper; for if sufficient pressure be not used to force the chalk to adhere to the stone the lines will be effaced by the etching; it is therefore rather difficult to give the exact degree of pressure which shall be sufficient to fix the chalk on the stone, but at the same time not so much as to make the line darker than is requisite; this can only be acquired by practice, though, with care and attention, a very short time will give the requisite tact. Unfortunately, such is not the case as far as regards flat tints, for it is in these that the greatest difficulty exists. Even when executed by the most practised and skilful hand, the flat tints of lithography can never compete with the beautifully clear and silvery tones of line or aquatinta engraving. They will always look unequal, and for this, depending as it does on the nature of the materials employed, there is no remedy. It may, however, be greatly obviated by the use of a second, or tint stone, as it is sometimes called, of which we shall have occasion to speak hereafter.

The difficulty of execution, and the length of time required for flat tints are so great, that it has long been the custom for artists to employ assistants, who, confining themselves entirely to this part of lithography, are quicker in their

work, and make clearer tints than the artist can hope to produce; but, as all flat tints cannot be trusted in the hands of an assistant, it is highly necessary that the draughtsman should be able to execute them himself, which is best done by repeated faint short lines laid parallel to each other, and all laid in one direction, till a certain space is covered; the same operation must then be repeated with lines in a different direction, remembering not to cross the lines previously laid at right angles, but at an angle as acutely as can be conveniently used to ensure a perfect crossing of the other lines, and so on, continually crossing in new directions till the tint has acquired a sufficient strength.

When any part is too dark, it is reduced by *perforating* the lithographic chalk on the stone with minute holes till a sufficient quantity of the chalk is removed to bring the tint to the required strength or tone. These holes should always be of the same size as the hollows or granulations, which by the help of a magnifying glass may be perceived in the stones. Thus, the coarser the granulation, the larger the holes may be made by the needle, or knife point.

In general, the broad lights in the sky, on buildings, trees, ground, rocks, &c., are left, but the small threads of light, such as are seen in dark weather in weeds, which are brought out light against a dark back-ground, and in many objects when sharpness is required, must be scraped out, either with a sharp penknife or a pointed scraper.

It sometimes happens that a fine dark line is required; this must be done with the brush before described, and the lithographic ink. Ink may also be used when a mass of intense depth is necessary, but should be very carefully,

and as seldom as possible, employed, for it is extremely difficult to make it harmonize with the chalk.

The great trouble in executing flat tints, and their unsatisfactory appearance when done, as well as the handsome appearance of sketches made on coloured paper, and touched up with white, led to the invention of the second stone, by means of which such sketches are imitated in the most perfect manner. The method has been described by the present author in "The Art of Engraving in all its different styles," published by Messrs. Ackermann & Co., Strand, and is as follows:—

Take Wax . . . . . 2 parts,
Soap . . . . . 1 part,

Add a little vermilion to colour it, melt it in a pipkin, or saucepan, and cast it into sticks; rub this composition with water till it is as thick as cream, and then cover with it a polished stone, such as is used for writing upon. An impression of the first stone is applied to the stone so prepared, and the parts intended to be white are taken out entirely with the scraper, whilst those intended for half tints, are scraped somewhat less, so that by this method several different degrees of strength can be obtained.

The manner of printing is, first to take an impression of the second, or tint stone, in any colour the artist thinks will best suit his subject; on this impression the first stone is printed in black, proper care being taken by having marks on the first stone to correspond with similar marks on the second stone, so that the two impressions may fit exactly, otherwise the effect will be entirely spoiled.

One mode of marking the two stones is to make small shallow holes in the corners, so that the paper may become slightly embossed at the corners by the pressure used in printing; these are scarcely visible to any but the printer, and enable him to arrange the paper with great accuracy on the second stone.

Another method of preparing the tint stone is, after an impression has been taken from the first stone to the second, to cover the bright lights, which are to be left white, with thick gum-water and a little vermilion. The whole is then covered by rubbing a stick of the composition, described above, on the stone, so as to cover it entirely with a very thick covering, after which the superfluous composition is scraped off with the straight edge of a piece of ivory, or horn, and what remains is to be well rubbed into the stone with a fine piece of woollen cloth, stretched over the end of an oil-rubber which has never been used.* When performing this operation, a fresh place in the cloth is to be laid over the end of the rubber after every time that it has passed once the whole length of the stone, using all the care possible to make the stone imbibe an equal quantity of composition on every part of its surface, so as if printed it might give one even tint all over the impression.

In order to procure the different degrees of middle tint, two methods are practised. First, when a defined edge is not wanted, the composition is to be rubbed off with the woollen cloth; this method is useful for softening the edges of clouds, and to soften the hard edges of the positive

* The oil-rubber is made of a long strip of woollen cloth, rolled up as tight as possible, and tied with string; for general purposes, it should be six or seven inches long, and two or two and a half inches in diameter.

whites, which, have been laid on with gum, first washing off the gum and vermilion with water. In this way, also, the gradations of evening skies are executed.

In the second method all the middle tints which have a defined edge must be scraped up very carefully, otherwise they will be uneven. The scraper may also be advantageously used to soften the positive lights.

When only one tint with the edges of the lights not softened is required, the quickest way is to lay in the white touches with gum, as before directed, on the tint stone after the impression of the first stone is transferred to it, and then send it to the printer, who, by passing the roller a few times over it will give it a tint, which, if necessary, may be softened at the edges of the white places, or have fresh lights taken out with the scraper.

In making ink drawings, not only should the stone be highly polished, but it should also be of the hardest kind, or the steel pen would often scratch the surface instead of properly writing on it. The brush, already described, is a useful instrument for executing all kinds of line drawings, whether in landscape, maps, or plans; but the steel pen is so much more expeditious, that it is more frequently employed, particularly for straight lines, as these cannot well be ruled with a brush.

Of late years zinc plates have been used for the embellishment of books instead of stone. The working on them is called zincography. Their great portability, when compared with stone, would render them extremely convenient, and for many purposes they would be preferable, but that nothing which has once been done, can be effaced and again retouched, nor can lights be taken out. Thus,

they must always be left, which, in many cases occasions much trouble. Neither has the work on zinc plates the free and bold sketchy style that is obtained on stone. From the above, it will be readily seen that zincography can only be executed by a draughtsman quite certain of his work; but in such hands it has this great advantage, that the faintest touch, which in lithography might be effaced by the etching, on the zinc is sure to print. The process in working on zinc greatly resembles that on stone, as the same chalk and same mode of printing may be used for both.

When the drawing is finished on the stone, it has to be subjected to a series of operations, the first of which is called etching, requiring great experience in the operator, as every difference in the chalk or quality of the stone, and even the work of different hands, require a different treatment in this process, *viz.* more or less application of the acid; for a firm touch of the chalk will admit of a strength of acid that would sweep away the lighter pencillings of a more uncertain hand.

Etching is performed by placing the stone in a trough on one edge, in a slanting position, and then pouring over it a mixture composed of one part nitric acid to one hundred parts of water, which will be sufficiently strong to cause a slight effervescence; the stone is then to be placed with the upper edge downwards, and the operation repeated, passing the acidulated water several times over the darker parts, which require much more etching than the lighter touches. When sufficiently etched, the stone has to be carefully washed by pouring clean water over it, and then gum-water, and when not too wet the roller,

properly charged with printing-ink, is rolled over it in different directions, *viz.* from end to end, and side to side, till the drawing, by taking the ink, appears as it was originally made, for the effect of the acidulated water is to destroy the colour, whilst by operating on the alkali, it neutralizes it and changes the saponaceous portions of the chalk into a greasy substance.

The stone is now covered over with a thick solution of gum-water; this, by filling the pores, prevents the lines from spreading, and, at the same time, preserves the drawing from dust, and, in some measure, from external injuries. It is better to leave it for a day or two, but not more than a week, before it is printed.

To many, a short description of the lithographic printing-press will be acceptable, and we have taken the following account from the second volume of the Magazine of Science, page 202. "The press is composed of a strong wooden frame, supporting the platten or bed of the press, upon which the stone is placed, and which runs upon rollers. At one end of the platten is placed a ledge of the same height as the general thickness of the stones and to this is fastened a frame of iron, on which a piece of leather is stretched, and which, by means of hinges, will either shut down over the stone, or by turning back, leave it entirely uncovered; this is called the tympan.

Over the centre of the table on which the platten runs, is an iron frame-work supporting the scraper; this, by means of a screw, may either be forced down upon the stone, or raised from it at pleasure. It is made of box-wood, with a bevilled edge.

The manner of using the press scarcely needs descrip-

tion. The platten is drawn out, the stone inked, and the paper placed upon it; the tympan is then shut down over the paper, the screw is turned till the scraper is forced down close upon the stone, near the end of the paper. The handle is then turned which brings the platten forward by means of a small wheel and rack inside; so that the whole length of the stone is forced underneath the scraper, which presses down the tympan, and thus makes the printing-ink adhere to the paper. The handle is now loosened so as to admit of the bed or platten being easily drawn back, when the tympan is lifted up, and the impression, now complete, is removed, and the operations are repeated with another piece of paper.

It is on this principle that all the lithographic presses, we believe, are constructed; though in some, which are only adapted for small work not requiring much care, the stone remains stationary, and the scraper, attached to the end of a long lever, is made to pass over the tympan.

It may not be unacceptable to our readers to give the sizes and prices of the kind of press we have just described.

Size.				£.	s.	d.
Press.....	9 inches by	14	inches, cost	5	5	0
Do	15	20	.....	7	10	0
Do	18	23	.....	9	10	0
Do	20	26	.....	12	12	0
Do	24	30	.....	17	0	0
Do	26	34	.....	20	0	0
Do	28	40	.....	22	10	0
Do	30	45	.....	25	0	0
Do	32	55	.....	28	10	0
Press Stands		.....		0	12	0

We have now to describe the process of printing.

The stone being placed on the bed of the press, and carefully adjusted to the surface, is sprinkled with rain-water, in order to dissolve the gum, a wet sponge is then passed lightly over it. The roller is to be covered with ink by working it in several directions on the colour table; the printer then passes it over the stone lengthways and crossways, till he perceives that the drawing has taken the ink equally all over, and in a proper quantity. The management of the roller is one of the most difficult things in lithographic printing, as the production of a good impression depends very greatly on the steady even pressure of the roller and the facility with which it turns on the stone. It also depends on the printer, either to force the stone to receive more ink or to take it up from the stone, and he has it thus in his power to vary much the effect of the prints. When the roller slips instead of turning round, it is caused either by the stone being too wet or by too much gum remaining upon it; this is to be remedied by a dryer sponge in the first case, or by again gently washing the stone with a little water in the second; some gum, however, should always remain on the stone, and at the same time it should not be kept too wet, as the water in excess would spoil the ink, and be also absorbed by the roller, which would thus be rendered unfit for use.

The drawing being filled in with ink, the paper, properly damped, is laid carefully over the stone, in such a manner that the driving of the scraper may not force it into wrinkles; the tympan is then laid over it, the scraper, of which the edge must be perfectly even, and free from notches, is then screwed down on the end of the paper, and the stone passed

along under it by turning the handle in a steady even manner. The screw is then loosened, so as to admit of the bed being easily drawn back when the tympan is raised, and the impression taken off the stone.

On removing the paper from the stone, it will be found that the paper has absorbed all the moisture; the sponge must therefore be again applied to the stone, the roller again carefully charged with ink, and the same operations repeated till the number of impressions required have been obtained.

When the stone has to be set aside for use at some future period, the drawing should be rolled in with a preserving ink, by which the drawing on the stone is prevented from becoming hard; if this be not done, the lines will not take the fresh ink so readily again. The preserving ink is made as follows:—Two parts of thick varnish of linseed oil, four parts of tallow, one part of Venetian turpentine, and one part of wax. These are to be melted together, and afterwards four parts of lamp-black gradually mixed in till the whole is completely incorporated; this is to be kept for use in a box or vessel well closed.

During the printing, it is necessary that some gum should always remain on the stone, as we have before stated; when, therefore, it happens that the constant use of the sponge has taken it all off, fresh gum-water must be immediately applied, or if too little gum has been put on to a stone that has been laid by, gum-water is to be used when printing it instead of common water. The absence of gum makes the stone take the ink as well as the drawing, and when from this cause the stone becomes stained, the

spots are either to be stippled out with a needle, or some strong acid must be applied with a brush, and when washed off, gum-water is to be dropped on the place. It is, perhaps, needless to remark, that as the edges of the stone soon become much soiled from continual handling, great attention must be paid in order to keep them clean, otherwise the margins of the impressions will be marked by them.

One of the many difficulties in lithographic printing arises from using improper ink: an ink, which is too thin, will stick to the stone, notwithstanding all the precautions which may be used in wetting and gumming the stone; and again, ink used that is too stiff, will tear up those lighter parts of the drawing which have not been laid in with so firm a hand as the rest. It does not, however, follow that the ink which will print well at one time will always do the same. An increase of temperature will cause the stiffest ink sometimes to soil the stone, whilst the thin ink, which can scarcely be used in the hot weather of summer and autumn, will in the depth of winter have acquired a consistency sufficient to admit of its being used. But we may here remark that the excess of either heat or cold should be avoided, and the room kept in that medium degree of temperature best suited not only to this, but every kind of printing.

It will sometimes happen, that whilst printing, the ink, combining with the chalk of the drawing, will accumulate on the lines, and, by softening, cause them to spread, and to print in dark spots. When this occurs, it will be necessary to wait a few days, that the drawing may regain

sufficient hardness, and then if the lines of the drawing should become confused, and run together, it may be cleaned with the following mixture:—

Water Sprits of turpentine Olive oil	}	Equal parts.

Put these into a bottle, and shake the mixture well till it froths. Then wet the stone, and throwing this froth upon it, rub it lightly with a very soft sponge. This mixture will dissolve, and clear away the printing-ink, and also the drawing, which latter, however, will re-appear again quite clean on rolling it well with the printing-ink.

Paper made from rags that have been bleached with oxymuriatic acid, is quite unfit for lithographic printing, as, in a very few impressions, the drawing will be quite ruined. Chinese paper, from having a strong admixture of alum, is also dangerous, although, sometimes, it may be found of a quality sufficiently safe for use.

A lithographic ink has lately been invented by Mr. Hullmandel (for which he has taken out a patent), that produces the appearance of a sepia or Indian ink drawing. It is used with a brush on the stone in the same manner that colours are wrought on paper, and when printed has all the effect of a mezzotint engraving, with the great advantage of not being a copy, but a print taken directly from the artist's original work. We have seen some excellent specimens of this kind of lithography, and if it can be made to work with the same degree of certainty

as the chalk, it will become a valuable addition to the fine arts, on account of its much greater facilities wherever shade tints are required, and the rapidity with which an effect, whether of the lighter, or darkest kinds, can be produced.

DESCRIPTION OF THE PLATES.

Coloured prints can do little towards giving any thing like the true representation of painting, as they contain many great faults; faults consequent on the manner in which they are produced: nor will the expense ever permit publishers to employ that talent, which alone could make an attempt with the least probability of success. Thus from such prints we can only obtain a general idea, if any, of that delicacy so necessary to ensure some idea of the original. In black prints, the light and shade, with the outline, may be serviceably given: the composition or invention is also, as far as the want of colour will allow, complete; but the chiaro-scuro must remain imperfect, as colours which stand for shade and colour in the painting can only be represented as shadows. These defects occur also in the lighter tints, for a great variety of hues and colours will often be so exactly balanced, whether in the lights or middle tints, that they can only be represented in the print by one and the same tint or shade, most frequently producing an unpleasing and undiversified breadth of light or monotony of shadow. In portraits this difficulty obliges the engraver to consider which is the least evil; whether to omit altogether the carnation tints, or to represent them by a shadow in the middle of the face; for he must do one or the other.

Notwithstanding the above, much may be gathered from good prints; and in those which accompany the present work, more has not been attempted than the means will permit, *viz.* to give an idea of outline and of light and shadow from a few of the works of the best artists.

It will be perceived by a little attention to them as well as to others, that as far as outline is concerned, artists have not been always very solicitous about one arrangement more than another; for we frequently see the chief objects placed in different parts of a picture, sometimes with particular contrasts and accompaniments, at others with few or none, and not seldom the same effect of light and shade used for altogether unlike, or nearly similar subjects. As an example of the latter, we have given two subjects from Claude Lorraine, at the top and lower end of the 4th plate.

PLATE I represents two palettes, the upper one being charged for landscape (finishing), and the lower for portrait painting. It has to be noticed here, that in large works the palette most commonly has not more than two or three tints placed on it, on account of the great quantity of colour used in the commencement of such works; but as the work proceeds, the palette holds a greater variety of tints, less of each being wanted; but in all cases the tints are laid on the palette in a regular progression, beginning at the nearer end with white, and ending on the farthest part with the darker colours. The light colours being most wanted, are placed most within reach. The

brushes at the bottom of the plate are of the size and shape most generally useful.

PLATE II, *Figs.* 1 and 2, are given to show the contrast of a warm and cool style of colouring. In *Fig.* 1, sunshine, the greens on the foreground are necessarily of the richest kind, and other colours, of whatsoever kind, under the same influence (sunshine), would be equally rich; these would all change gradually as they retire from the front, by the increase of the intervening air tint, till they mingle with the sky, as the greens in the *Fig.* 1, where they are contrasted by the dark leaves and rich browns of the large tree, whilst the warm tone is kept up by the orange tints of the Bittern. In *Fig.* 2, all is more subdued, and partakes of the cool grey which a cloudy atmosphere invariably gives, more or less, to every object, however warm the colour of that object may be. *Figs.* 3, 4, 5, and 6, in four different progressive states—No. 3 being the outline, with the yellow of the sky laid in, and brought down over the foreground. *Fig.* 4 has the blue of the sky, the warm tint of the hill-top changing into blue; the first tint of warm green also changing into a green grey; the brown of the house, and the first tint on the grass and road. In *Fig.* 5, the hill has received its finishing tints of blue; the trees and grass are more wrought, and the house and road have also had an additional tint. In *Fig.* 6 the whole is finished, the figures, which are generally done last, being introduced.

PLATE III. *Fig.* 1. This subject is introduced as a specimen of mild contrast; the green of the trees, the grey of the palings, and the tint of the water, forming a mass of middle tint of more or less strength throughout

the picture, the object of which is to bring out the colours of the cow, the only point of interest in this piece. This kind of effect, although not so good for subjects where a number of objects are combined, is particularly adapted for the representation of a single figure, or animal, which is rendered more striking by the breadth of middle tint surrounding it. Sketches on grey paper, touched up with white, generally come under this class, and are peculiarly pleasing. *Fig.* 2 is an example of one of the most easy and at the same time agreeable effects: we mean the placing a light object on a light background. In this subject, the light part of the ruin is brought out from the light sky, entirely by the contrast of the cool colour of the latter, standing against the warm tints of the former. *Fig.* 3. An evening scene, arranged somewhat in the manner of Cuyp, who generally placed a light and dark object together on one side of the picture, and then brought a still darker object against the light part of the sky, in order to render it more brilliant, and by the excessive contrast give piquancy to the whole. This subject is taken from a sketch by the Author's brother, the late Thales Fielding, Professor in the Royal Military Academy, Woolwich, whose early and lamented death shortened the estimable career of one who was steadily pursuing his way to the summit of his profession, and the Author regrets that no coloured print can do justice to the sketch. To the print collector, the Author begs to point out a mezzotinto engraving from a painting by Thales Fielding*, which for true poetical pathos, in the writer's estimation,

* Died Dec. 20th, 1837, aged 41.

yields to few. The subject is the last interview between Robin Hood and Little John, at Fountain's Abbey. The invalid (Robin Hood), reclining on a couch, draws his bow, with an arrow placed, in order to point out to his friend, by the flight of the arrow through an open window, the place where he wishes to be interred. The size of this engraving is 14 by 18 inches, and it is ably executed by Thomas Lupton, Esq.

Fig. 4. In this subject the black stormy clouds mingling with the dark part of the sea, form a strong contrast with the light parts of the sky, in the style of Rembrandt, who sacrificed every thing for the sake of one brilliant flash of light, regardless whether that light fell on the white turban of an Eastern king, or the linen of a child's cradle.

PLATE IV. In the centre the subject, taken from Rembrandt, is composed of one mass of dark, and another of light; in the middle of the picture, the darkest point of the gable end of the cottage is brought against the light of the sky, so as to bring the whole of this end of the building forward; the farther end of the roof being light, and massing with the lights of the sky, retires, and thus completes the perspective of light, shadow, and colour, and unites the lights of the sky with the ground, preserving a breadth and unity in both. The unity of the shadows is well arranged, by spreading it from the building through the shade it casts on the ground into the brook, where they are naturally broken by the rippling of the water, and graduated into the foreground lights.

PLATE V. *Fig.* 1. Cottage; Everdingen. *Fig.* 2. A Child in a Cradle, a remarkable specimen of Rembrandt's single light. *Fig.* 3. Cottages; Rembrandt.

PLATE VI. *Fig.* 1. Banditti; Claude Lorraine. *Fig.* 2. Hagar and Ismael; Lud. Carracci. *Fig.* 3. The Infant Saviour and St. John; Raphael. *Fig.* 4. Rembrandt's three Trees.

PLATE VII. The subjects on this plate are compositions of figures. The centre subject is from Rembrandt, and represents our Saviour conversing with his disciples. Here the effect of light and shadow is produced in the most natural and inartificial manner. The chief light is on the principal figure, made more powerful by breadth, being carried also on to an adjoining figure, which, though equal in light, is not so in interest, having a more subdued action and colour. These lights gain additional breadth by uniting with the middle tints of the back-ground, and the whole is opposed by one mass of dark shadow, preserving a strict unity of light and shade, which in the original painting would be made more perfect in the completion of the chiaro-scuro by colour.

The subject at the top of the plate is also from Rembrandt—the "Pilgrims of Emmaus," in which the dignity of our Saviour is preserved by a small increase of size and the most perfect simplicity of manner. The three female figures at the bottom of the plate are the three Marys, visiting the sepulchre, from Salvator Rosa. We shall not criticise these small specimens any farther than to call attention to the ease and natural positions of the figures in both subjects, and the serpentine lines used by Salvator in the attitudes of the female figures, which, being well suited to the action, add much grace.

PLATE VIII. *Fig.* 1. Girl Spinning; Ostade.

Fig. 2. The Crucifixion; Rembrandt.

PLATES IX, X, XI. From paintings by the Author.

PLATE XII. The upper subject is from Vandervelde. In this the same care is shewn in order to obtain a grand effect by the simplest means, a large mass of light graduating through every degree of demi-tints into a positive mass of darkness on the rock and sea at the front of the picture. It may be here observed, that the darkest shadows should never be continued to the bottom of the picture; but must be so much enlightened as to convey to the mind some idea of returning light.

The lower subject on the same plate, "Christ quelling the Tempest," is from a picture by Vlieger, an excellent painter of marine subjects, from whom the younger Vandervelde derived his instructions. In this the effect is obtained by a different process. The lights, although kept near together, are broken by sharp contrasts: thus the dark figures in the boat, contrast against the waves at the stem; the bright light under the bows of the vessel is opposed to the dark shades of the vessel, and water. This method will produce great brilliancy of the colouring if the colouring be judicious, and not disturbed by too many asperities in the contrasts; for where a sufficiency of effect has been gained by light and shade, a much milder, and harmonious style of colouring may be arranged, than where most, if not all, has to depend on the colouring of the picture for its effect.

From the foregoing plates it will appear that every kind of outline may be used, and also that it is not very important in what part of a picture a chief light be placed, if the rest of the picture be arranged in proper accordance with it. We should say as a general rule that if the principal light be placed about the middle of the picture, the

remainder will be more easily arranged than when it is placed to one side, for all effect, both of light and shade, is contingent upon a fixed principle in vision, *viz.*, that when the eye is regarding attentively one object or group of objects, the remainder, which may be within the field of vision, are less and less distinctly seen as they recede from the group under examination, and become, in places where shadow may happen to lie, so indistinct, that, in pictorial language, they serve as reposes, or places which the eye can examine without the excitation occasioned by those groups which are in strong light and shade, for it is a natural consequence that bright lights should be accompanied by strong shades, and that they should also enforce each other by the most powerful contrast.

It will also be found on going through the accompanying plates, that a powerful effect is not always produced by merely a juxta position of strong lights and shades, or of colours forcibly contrasting each other, for as much effect may be produced by harmony in colouring or breadth of light and shade, and it is a question whether a more lasting and powerful impression may not be made on the mind by the harmonious adjustment of colours, as used by Guido, Murillo, and others, than by the most gorgeous display and arrangement of contrasts, which so greatly captivated almost all the masters of the Italian schools.

LONDON:
C. WOOD & CO., PRINTERS, POPPIN'S COURT, FLEET STREET.

Plate 2.

1.

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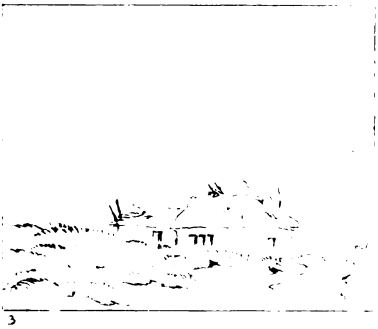

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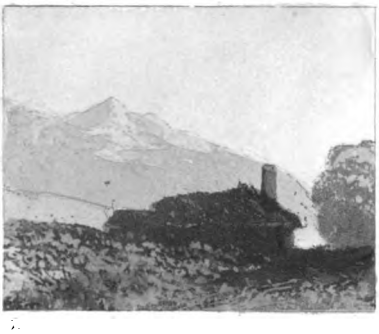

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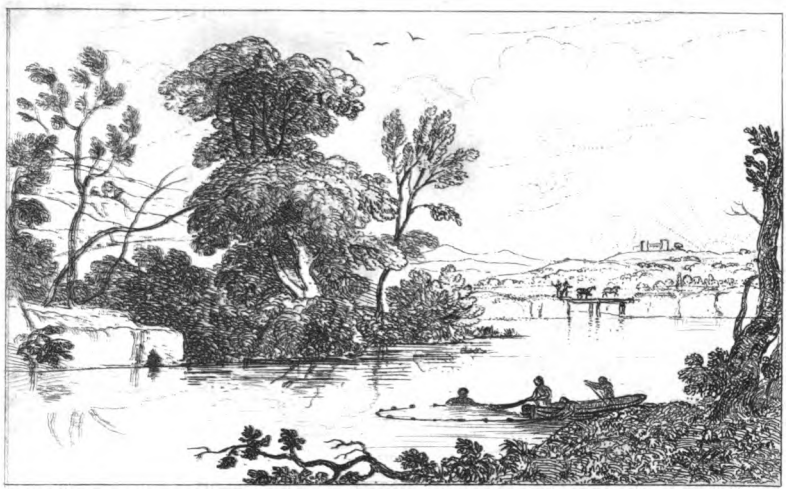

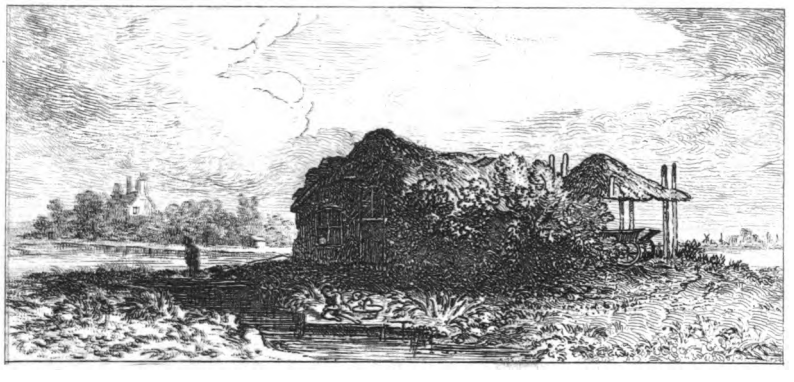

Plate 5.

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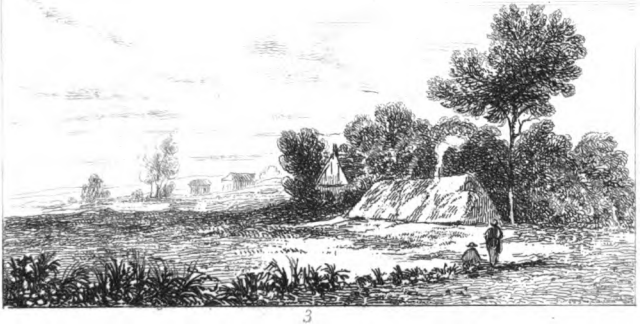

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Plate 6.

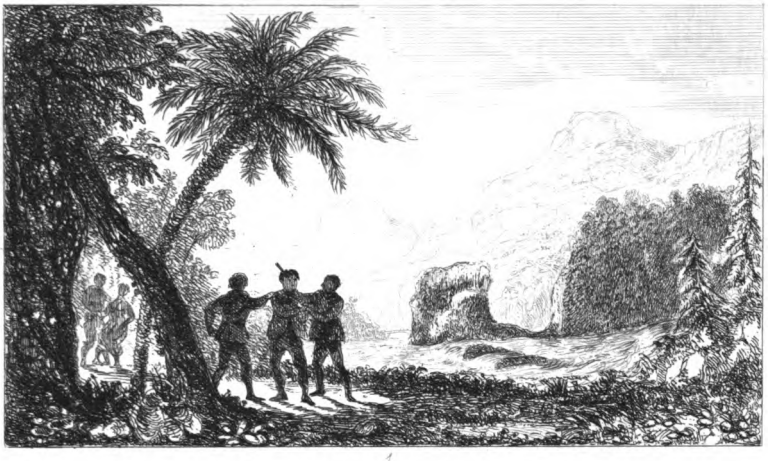

Plate 7.

Plate 8.

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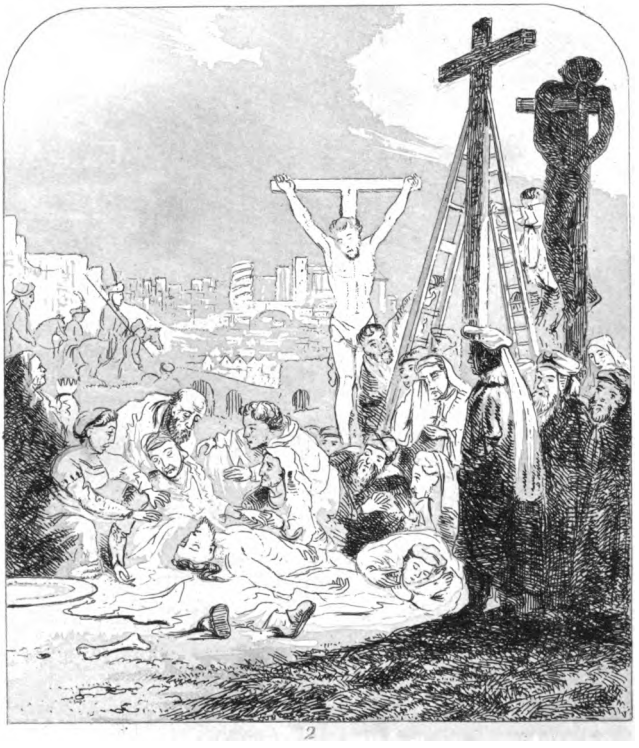

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Plate 9.

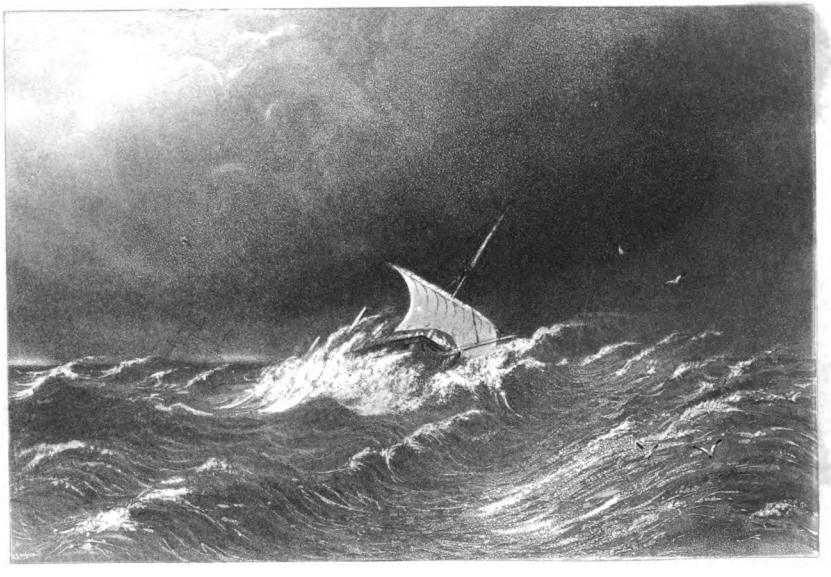
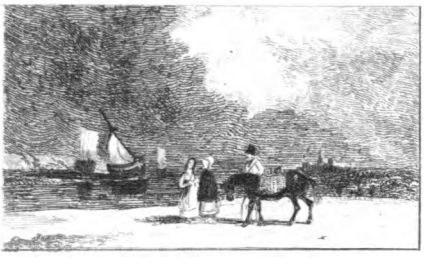
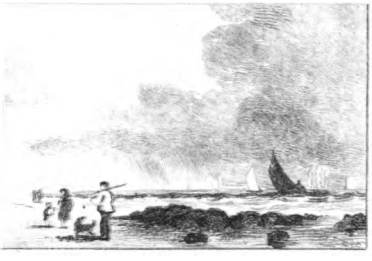


Plate 10.





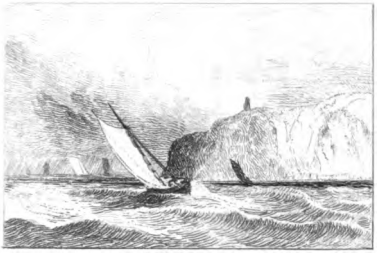


Plate 11.

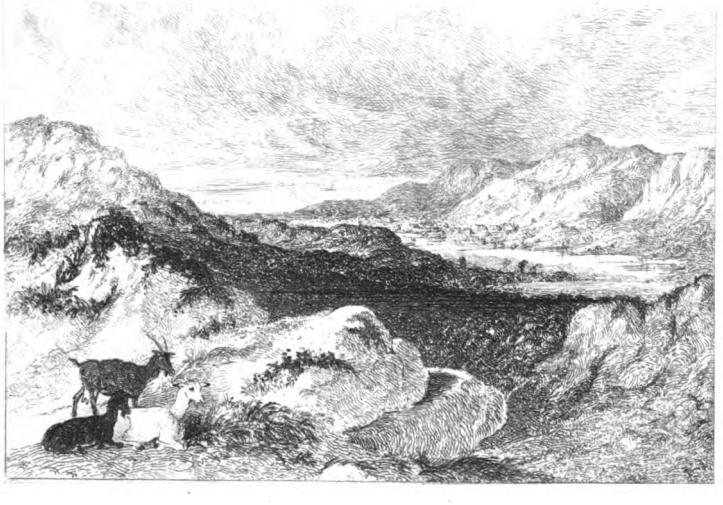
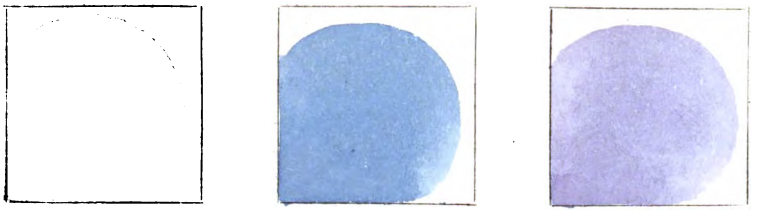


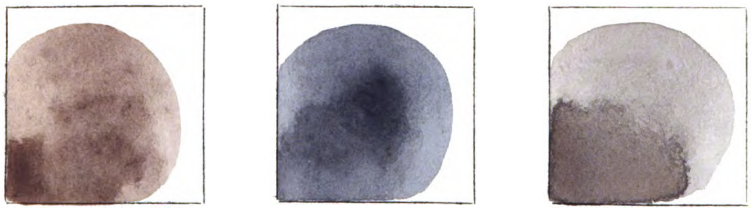
Plate 12.



Lake and Indigo.

Lake and Cobalt.

Madder Brown and Cobalt.



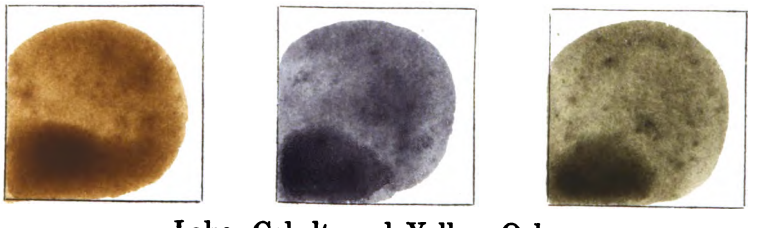
Madder Lake, Cobalt, and Yellow Ochre.

Indian Red and Cobalt.

Indian Red and Indigo.

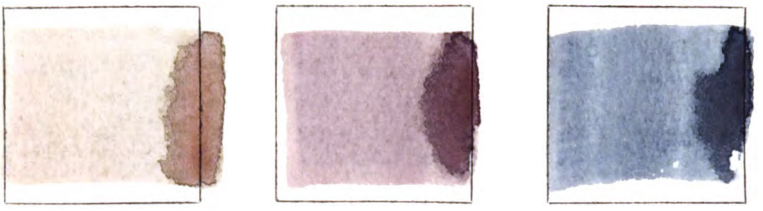
Light Red and Cobalt.

Vermilion and Cobalt.

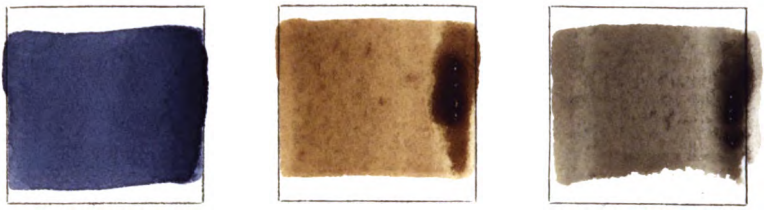


Lake, Cobalt, and Yellow Ochre.

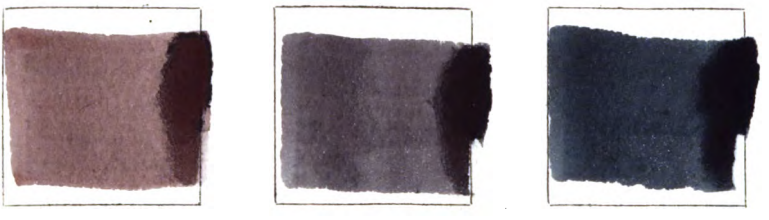
Lake, Indigo, and Yellow Ochre.



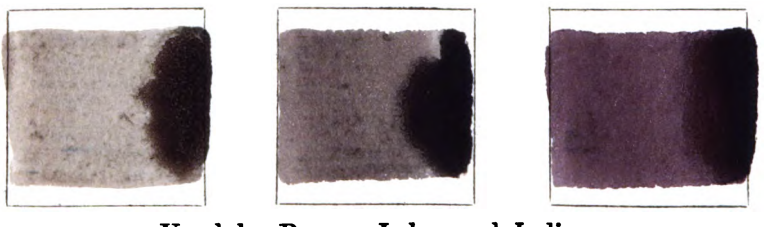
Gamboge, Lake, and Indigo.



Raw Sienna, Madder Lake, and Cobalt.

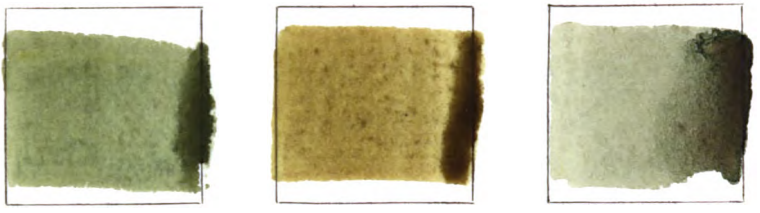


Light Red and Indigo.

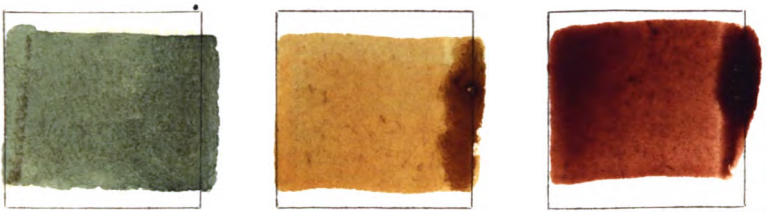


Vandyke Brown, Lake, and Indigo.

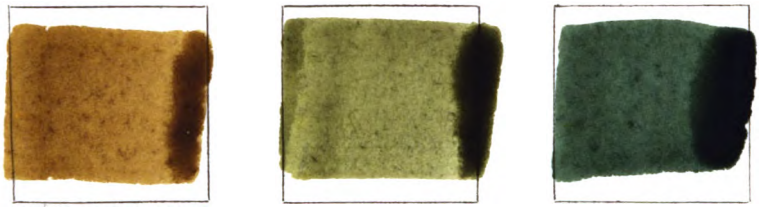
Burnt Sienna, Lake, and Indigo.



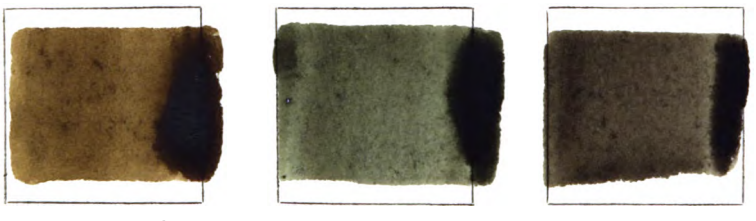
Gamboge, Light Red, and Indigo.



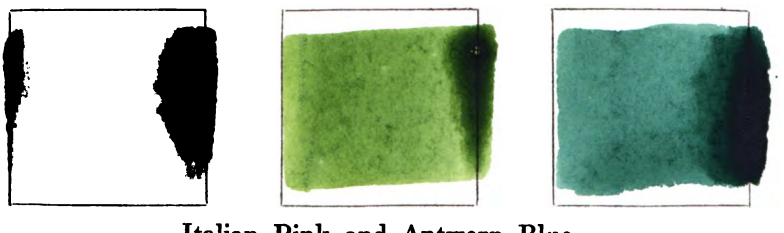
Gamboge, Burnt Sienna, and Indigo.



Gamboge, Burnt Sienna, and Antwerp Blue.

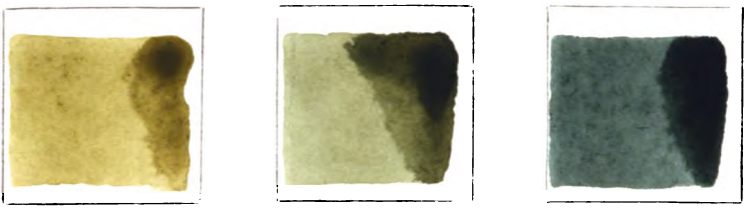


Vandyke Brown, Gamboge, and Antwerp Blue.

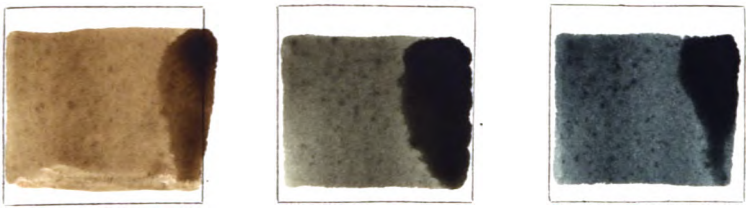


Italian Pink and Antwerp Blue.

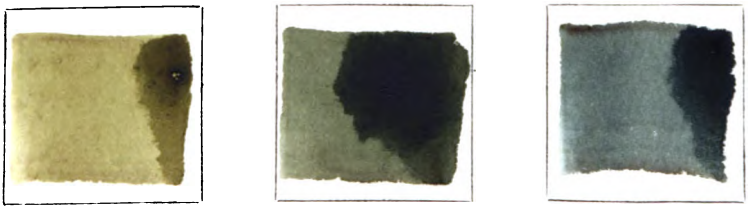
Italian Pink and Lamp Black.



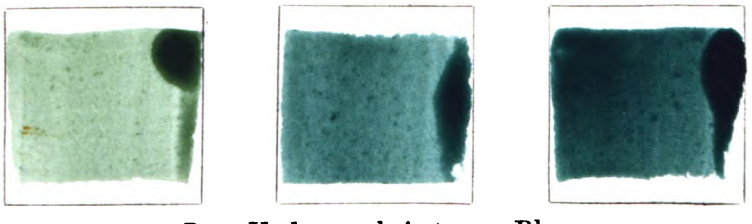
Yellow Ochre and Indigo.



Burnt Sienna and Indigo.



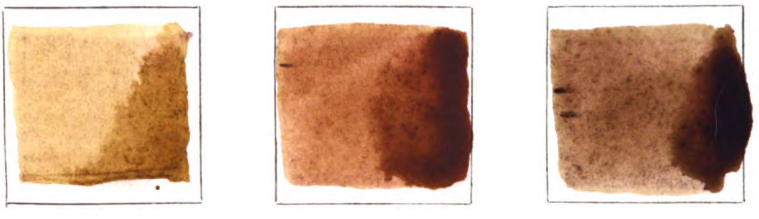
Brown Pink and Indigo.



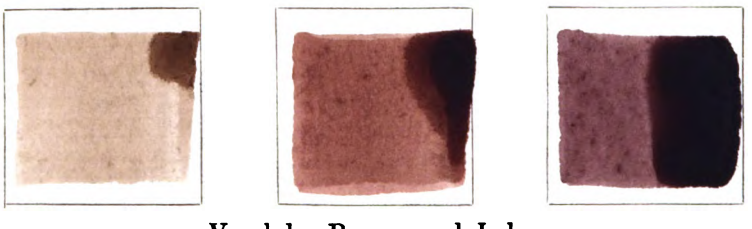
Raw Umber and Antwerp Blue.

Yellow Ochre and Lake.

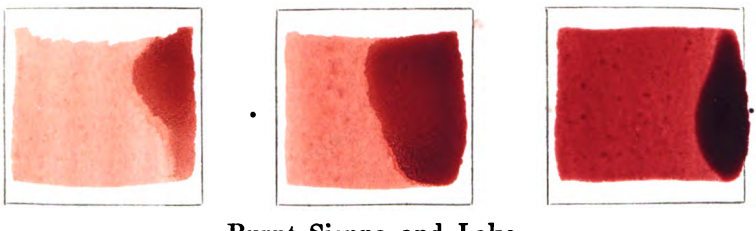
Yellow Ochre and Light Red.



Yellow Ochre and Vandyke Brown.



Vandyke Brown and Lake.



Burnt Sienna and Lake.